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REGIONAL PATTERNS OF DEVELOPMENT IN TAMIL NADU

LONG TERM STUDY PROJECT ON THE INDIAN ECONOMY A REPORT

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EDITORIAL - SOME HIGHLIGHTS

I General Economic Scene

State :

1979-80 Perspectives: The opening of state legislature in early February was the occasion for a round up of the economic developments to be undertaken in 1979-80, with emphasis on industry and employment. A modern salt factory at Vedaranyam, with salt pans on either side of the Buckingham canal, utilising the Coolant waters of the Kalpakkam power station is to be developed. A joint sector project, Tamil Nadu Magnesite Ltd. using the state's magnesite, the soda ash plant of Tuticorin, Alkali Chemicals Corporation had been reviewed and a bagasse based newsprint plant are all to be launched. The 8 District Industrial Centres which within 6 months of their establishment have assessed 900 new small industries, providing employment to about 11,000 persons are to be expanded to all districts. Small industries are to be exempt from any future power cuts. To further develop the silk industry, a Directorate of Sericulture is to be created and an additional 8,000 acres is to be brought under mulberry further to the 4,000 acres brought under cultivation during this year. To facilitate extension of credit facilities to small borrowers, the Tamil Nadu Industrial Investment Corporation opened branches in Tiruchirapalli, Cuddalore and Dharmapuri and an independent wing is to be organised under the Khadi and Village Industries Board to pay special attention to setting up of rural industries and marketing their products. During 1979-80 a project for the planned growth of villages starting with 5 panchayat unions in each district is to be launched to expand existing villages and plan new ones as well as provide adequate facilities like drinking water, street lighting, drainage and education. The scheme to build one lakh houses in rural areas is to be continued and intensified, with loans to be made available through co-operative house building societies, each covering a union division. Harijans with an income of less than Rs. 4,200 per annum would be given a subsidy of Rs. 600/=, the borrowers being allowed to contribute their share of 20 per cent of the cost either in cash or in labour, with encouragement to the poor of any caste to participate in the scheme. Village planning schemes like town planning schemes are to be launched. An employment guarantee scheme is to be started for the rural unemployed and they together with landless labourers and small farmers are to be trained in skill for creating self employment. A dry dock scheme has been put up for Union approval under which ocean going vessels—Indian and foreign —will be repaired and maintained.

1979-80 State Budget : The State budget for 1979-80 introduced in early March in the legislature (this year after the Union Budget) presents as usual the revised budget estimates for 1978-79 which shows an increase in Revenue income from Rs 680.08 crores to Rs.733.49 crores and Revenue expenditure from Rs. 726.76 crores to Rs. 765.37 crores resulting in a revenue deficit of Rs. 31.88 crores (down

from the estimated Rs. 46.68 crores) and a reduction in both capital receipts from Rs. 286.19 crores to Rs. 214.47 crores and capital expenditures from Rs. 282.01 crores to Rs. 205.74 crores, resulting in an increase of capital surplus from Rs 4.18 crores to Rs. 8.73 crores. The overall deficit for the year is thus reduced from the estimated Rs. 42.50 crores to Rs. 23.15 crores. The Annual Plan outlay for 1978-79 has increased from Rs. 305 crores to Rs. 323.42 crores plus Rs. 17.60 crores as advance plan assistance for cyclone/flood relief. The Budget estimates for 1979-80 provide a revenue income of Rs. 849.83 crores and revenue expenditure of Rs. 849.25 crores and hence a small surplus of Rs. 0.58 crores plus the additional revenue that will accrue from the new levies proposed for the year. On capital account, however, receipts are estimated at Rs 276.48 crores, expenditure at Rs.315.05 crores, *involving a deficit* of Rs. 38.60 crores and an overall deficit of Rs. 38.02 crores. On public account an income of Rs. 33.77 crores is estimated so that the net deficit will be Rs. 4.25 crores. The Annual Plan for 1979-80 is increased to Rs. 324.87 crores, plus Rs. 150 crores as Tamil Nadu's share of the Rs. 2,000 crores *transfer to the states* of Centrally sponsored schemes (see last issue p. 129) and as 1978-79 was the last year of V Plan, in accordance with NDC decisions, Rs. 30 crores from the Annual Plan for 1978-79 is treated as committed expenditures. The larger revenue estimates are due to the liberal recommendations of the Seventh Finance Commission (See Vol. IX pp. 5-6) under the proposed expenditure, the following major developmental outlays are proposed: a) Agriculture and allied activities are allocated funds with a view to increasing foodgrains production to 88.73 lakh tonnes and commercial crops production to 36.45 lakh tonnes, with a special provision of Rs. 5 lakhs for the new seed certification department to provide quality seeds, Rs. 40 crores from the Union government on Operation Flood II covering an additional 9.5 lakh cattle and 8 lakh farmers, Rs. 263 lakhs for plantations over 30,700 hectares and a Rs. 35 lakh crumb rubber factory, Rs. 2 76 crores for fisheries development involving distributing 160 mechanised boats; b) under rural development Rs. 7.12 crores from the Union government and Rs. 10 crores from the state to benefit 30 panchayat unions in addition to the 161 now being aided; c) under irrigation Rs. 25.17 crores are provided including work on the Girudamalnadhi-Paralayar scheme in Ramanathapuram district for irrigating 12,500 acres; d) on power Rs. 152 crores are provided to increase installed capacity from 2,509 MW to 2,929 MW and cover the Servalar Hydro electric, lower Mettur and Tuticorin projects; e) on industrial development Rs. 153 lakhs are provided for industrial centres which will be extended to all districts. SIDCO will be putting up 2,000 *sheds at a cost of Rs. 1.5 crores.* In addition to the Union subsidy in 33 taluks, the State government will give a subsidy of 15 per cent for small industries in backward areas and through SIDCO disburse Rs. 25 lakhs to provide margin money to sick industries; f) an employment guarantee scheme is provided under which *all unemployed persons in rural areas* above 18 years would be given work at the rate of Rs 3/= per day plus some rice and wheat. In 1978-79 the Government estimates that it has created 1,30,000 jobs in sericulture, match industry, co-operative tea factories and small industries and while this effort will be intensified in 1979—80, the innovation is the creation of rural employment; g) the education provision includes appointment of 1,000 additional teachers, 200 additional physical instructors science equipment for 200 middle schools, all government higher secondary school are to be equipped with laboratories and aided higher secondary schools are to be given a matching 40 per cent grant with a ceiling of Rs. 1 lakh for laboratories and Rs. 6,000 for libraries. 1,740 higher secondary teachers for the new courses are to be appointed; h) under health, mobile

clinics are to be set up at a cost of Rs. 62 lakhs in 100 rural primary health centres and Rs. 13 lakhs are provided for medicine to various subcentres. Rs. 32.87 lakhs are to be used to improve medical colleges, including upgrading Madras Medical College as a post graduate institution; i) 4 municipal and 41 town panchayats water supply schemes and Rs. 7 crores for urban water supply and sewerages are provided. Rs. 4.87 crores are provided for the Siruveni water supply scheme. In addition Rs 14.05 crores are provided for MMDA; and j) other welfare measures include provision of 1,000 tricycles to the handicapped, 1,000 bunk stalls for the self employed, 1,000 sewing machines to the destitute widows and Rs. 2.20 crores for harijan housing, implementing the Third Pay Commission's recommendations and extending them to the last grade of government servants and improving pensions. To meet the deficit estimated at Rs. 4.25 crores, the budget proposes 3 additional taxes: i) the Sales Tax 5 per cent surcharge operating till March 1979 in Madras, Coimbatore, Madurai, Tiruchirapalli and Salem and 32 KM belt is to be extended to all special selection and first grade municipalities and a 16 KM belt around them, ii) in addition to the 2 per cent sales tax on copra a 2 per cent sales tax on coconuts with exemption to those whose annual turnover does not exceed Rs. 25,000, and iii) a 2 per cent tax on hand made matches with exemption to manufacturers whose annual turnover does not exceed Rs. 25,000. These 3 taxes will yield a revenue of Rs 2 crores leaving Rs. 2.25 crores on the uncovered deficit. In accordance with the Kaiwar Committee recommendations, the government plans to give sales tax relief on raw materials for specified industries and compounding of tax dues as a means of promoting industries. The budget for 1979-80 is a modest one. Its strong point is that it continues the emphasis on agriculture and animal husbandry, extends relief to production activities in rural and backward areas and proposes an important programme for rural development. It is also directed at promoting small industries. The main lacuna in the budget is the absence of a policy on medium and large industries. The state which once was the third most industrialised state has now slipped to the fifth position. It is not the budget which should set industrial policy but it should reflect one and that it does not because of the absence of such a policy. Such a policy would call for mobilisation of resources and a higher level of investment and savings and in this the budget could help.

Power; The power situation in the state in February continued to be satisfactory and normal except for the second week. The legislature was informed that the first 210 MW generator of the Tuticorin thermal plant was to be connected to the grid during the month and the Central Electricity Authority had approved the 120 MW lower Mettur hydel power scheme. During the second week the power supply from Neyveli declined sharply from 400 MW to 100 MW So power cuts were imposed from 6 to 8 A.M. and 12 noon to 2 P.M. in the towns of South Arcot and Salem districts and from 8-10 A.M. and 2 to 4 P.M. in those of Madurai, Thanjavur, Tiruchirapalli and Ramanathapuram. But from mid February the supply picked up, rising to 270-278 MW and on to 350 MW so that the restrictions were lifted from then Work on the 115 KM power transmission line linking Idukki with Udumalpet was begun and is to be completed by January 1980, at a cost of Rs. 303 lakhs, of which Rs. 213.5 lakhs will be spent in Kerala. This is the third 220 KW inter state transmission line linking Kerala with Tamil Nadu and with the completion, the rate of transmission of power through Kerala and Tamil Nadu grids will increase from 150 MW to 200 MW. Tamil Nadu and Karnataka have not yet been able to reach agreement on the sharing of Kerala surplus power. At present Tamil Nadu gets 2/3 of the surplus and Karnataka 1/3, Karnataka wants a 50-50 sharing, while Tamil Nadu proposes a

80.20 sharing, each state demanding a higher share to meet its growing industrial power needs. The two Chief Ministers of Karnataka and Tamil Nadu have agreed that their engineers will begin work on the preliminary plan for the Hogenekal power project which is sensible, because the priority surely is to develop existing potential and resources by both the power deficit states.

For the country as a whole, the power situation presented a varying picture in February. Bengal and Bihar experienced widespread power cuts due to the sharp drop in the Damodar Valley Corporation power generation of around 100 to 120 MW due to poor co-ordination and lack of fuel. In the two states CEC points out that power shortage is due to the poor performance of all their thermal stations as well as constraints in transmission and distribution. Even in power satisfactory Orissa, the non-availability of extra 4,200 KVA is delaying the expansion of one of its chemical units. CEC also estimates that Maharashtra faces an energy shortage of 800 MW to 1,000 MW by the VI plan end, with some relief from 1982. In the northern region, 3 hydro electric projects at a cost of Rs. 1,000 crores are to be launched in Himachal Pradesh and Jammu and Kashmir. The Union cabinet has approved the first 600 MW phase of the Farakka super thermal power station (the total capacity of the station to be 110 MW) at a cost of Rs. 320.80 crores. This station will increase power availability in the eastern region, west Bengal, Bihar, Orissa and Sikkim. The first 200 MW generator is to be commissioned in March 1984 and the remaining two at intervals of 6 months. The Union Energy minister reports that the installed power generation capacity in the country will increase by 3,000 MW by March 31, 1979, taking the total installed capacity from 26,000 MW to 29,000 MW, representing a 13.9 per cent increase. For the period April-January 1978-79, power output increased from 75,052 million units to 85,590 million units, which was an increase of 12.5 per cent. In January the power output was a record 9,150 million units. The Union government announced its decision in February to restrict to the minimum the use of cooking gas for industrial purposes (which has spurted from 10 to 25 per cent) from over 150 industrial consumers. This will increase its availability to domestic consumers for whom it is meant, while industry should use the alternative fuels of petrol, naphtha, diesel, vapourised kerosene etc. and use cooking gas only for their canteens or where there is full technological justification for it.

Western Ghats Development and Land Reform: In 1978-79 Rs. 142 lakhs are being used under the Western Ghats Development Programme which included 5 projects in Kodaikanal: (a) the cheese-cum-butter plant of the Kodaikanal Co-operative Milk Supply Union at a cost of Rs. 11.90 lakhs, (b) pulpwood plantation over 1,500 hectares at a cost of Rs. 24.31 lakhs, (c) building at a cost of Rs. 1.74 lakhs two telescope houses, one at Karunai Andavar Temple and other at Coakers Walk which will promote tourism, (b) bunny top eradication programme benefiting 14,000 hectares at a cost of Rs. 32.17 lakhs, and (e) growing of mandarin oranges over 250 hectares at a cost of Rs. 4.32 lakhs per annum. The State Government arranged in early February the issue of the Tamil Nadu Urban Land (Ceiling and Regulation) Amendment Ordinance which prohibits the transfer of any excess vacant land held by public charitable or religious trusts, and to that extent removing the exemptions to the Trusts granted to the trusts under the Tamil Nadu Urban Land (Ceiling and Regulation) Act 1978. Any land belonging to but not needed by the trust for religious or charitable purposes will come under the ceiling legislation immediately.

Transport: The Madras port reports that preberthing detention period of ships declined from 14 to 11 days during February and the number of ships in the queue

reduction in tax burden proposed, the Finance Minister *announced*: (a) total withdrawal of increased excises on confectionery, cocoa, chocolates and biscuits, (b) duty on lower priced soaps reduced from 15 to 12.5 per cent, (c) duty on soap reduced from 20 to 15 per cent, (d) on tooth paste from 25 to 20 per cent and on tooth brushes and locks to 8 per cent, (e) on machine produced matches from Rs. 9.20 to Rs. 7.20, (f) on shoes duty exemptions lifted from Rs. 10 to Rs. 15 per pair, (g) in addition duty on imported edible oils reduced from 12.5 to 5 per cent in view of the rise in international edible oil prices and its being an input into vanaspathi *manufacture*. These concessions will mean a revenue loss of Rs. 31.45 crores against which the Minister withdrew the duty concession on light diesel oil (which is not used by most farm pumpsets and might distort demand for other fuel oils), as a result of which Rs. 12.40 crores will ensue to the exchequer. As a result there is net outgo of Rs. 19.05 crores which has been added to the uncovered deficit, raising it from Rs. 1,355 crores to Rs. 1,374 crores. A first reaction to the Union budget is: (a) the increased taxing of the middle and upper income classes—on their consumption items, on their increased wealth-is in line with the objective of reducing inequalities of income and wealth, (b) the exemptions and incentives given to labour intensive and small and cottage industries as a means of increasing employment and increasing incomes of small producers are to be welcomed, (c) the large subsidy to agricultural production—notably the fertiliser and LSD excise reduction and excise exemption of raw tobacco does not distinguish between large and middle farmers who will gain from these large and increased resources placed at their disposal and the small and marginal farmers, (d) in fact the rural rich are not making their contribution to the tax revenues and as the KN RAJ committee recommended (see vol. III p 14-15) there is somewhere between Rs. 150 to Rs. 200 crores that they should have been required to contribute (in other words the disparity between the rural rich who are exempted from income tax and the urban rich and middle class is widened), (e) the reliance on indirect taxes compared to direct tax in the ratio of 5 : 1 is reliance on a regressive tax, (f) the potential of inflation with the Rs. 1,374 crores of estimated uncovered deficit to which some of the estimated increased revenues should be added is disturbing. The rationale that this deficit is not a matter of anxiety because of the large food output and stocks and large volume of foreign exchange is not convincing. The food stocks are dwindling, the food output for the next year cannot be forecast and the Economic Survey itself states that with the declining foreign exchange reserves, it is no longer right to talk of increasing reserves.

Railway Budget: The Railway budget for 1979-80 presented to Parliament in February shows a surplus of Rs. 126.23 crores for 1977-78 and 27.73 crores (down from the budgetted Rs. 65.43 crores for 1978-79, (see vol VIII p. 208). For 1979-80 the Budget shows traffic receipts as Rs. 2,456.15 crores, working expenses as Rs. 1,827.83 crores appropriation to DRF and Pension Fund at Rs. 264 crores, dividend to general revenues at Rs. 245.43 crores, leaving a surplus of Rs. 88.49 crores The new proposals are a 5 to 10 per cent supplementary coverage on all goods traffic except salt, revised fares for suburban and nonsuburban season ticket holders, with no increase in fares for passenger, mail, express or superfast trains. To promote rural development in the future agriculture oriented new lines will be considered and not only industry oriented ones, as till today. The budget provides Rs. 42 crores for 2 new railway lines—Ernakulam - Alleppey railway line and Tupkadih-Talgeria line in Bihar. Travel concessions are given to persons visiting industrial and agricultural exhibitions at the national level and increase in the age of 5 for children's free

travel. The revised fares (a) involving withdrawal of exemptions from supplementary wages on some commodities will yield Rs. 25.54 crores, (b) the replacement of the special fare for second class passengers up to 50 km by the ordinary fares will fetch Rs. 8.39 crores, and (c) increase in season tickets will yield Rs. 36.13 crores. The budget is based on the Railways moving a traffic of 222 million tonnes, against the 1978-79 205 million tonnes and a 6 per cent increase in passenger traffic, compared to 3.3 per cent expansion in 1978-79. The budget also reports the execution of the 4 new lines projected in 1978-79, and the start and completion in 1979-80 of 10 other lines and the improved and profitable functioning of the Diesel Locomotive Works, the Chittaranjan Locomotive Works and the Integral Coach Factory which for 1978-79 will produce 105 diesel locomotives, 34 spare diesel engines and 2 more diesel high capacity generating sets for Kalpakkam, 750 fully furnished coaches and 91 locomotives respectively. In the light of the consensus arrived at in Parliament, the Railway Minister agreed to reduce the proposed increase by 50 per cent in season tickets, which would reduce the surplus for the year to Rs. 70 crores.

Economic Survey: The Economic Survey presented by the government to Parliament forecasts a growth rate of the GNP at 1970-71 prices of 3.5 per cent for 1978-79 against the quick estimate referred to in the Presidential Address of 7.2 per cent in 1977-78. CSO reports a 5.2 per cent rise in per capita income for that year at Rs. 689.9 and a 4.8 per cent increase in per capita final consumption expenditure at Rs. 552.0. Agricultural production which recorded an increase of 13.9 per cent and foodgrains production an increase of 14.8 per cent in 1977-78, is estimated to increase at 2 per cent each in 1978-79. Despite the serious flood damage, kharif foodgrains production is estimated at a little higher than the previous year's 77.6 million tonnes, and with the good rabi forecast, the total for 1978-79 is expected to be higher than the previous year's 125.6 million tonnes. Pulses are not expected to show an increase. Commercial crops are expected to do better, sugar at above the previous year's 188 Lakh tonnes, groundnut at higher than 53 lakh tonnes of the last kharif, the total output of 5 oilseeds increasing from the 1977-78 89 lakh tonnes to 95 lakh tonnes, cotton production is expected to be 74 lakh tonnes compared to 71 lakh tonnes in 1977-78. Industrial production is reported to have increased by 3.9 per cent in 1977-78 due to a slowdown in basic metal, transport equipment and electricity generation and on the basis of the performance of the first eight months, April to November 1978-79, is expected to register an 8 per cent growth with sharp recoveries in electricity generation, food industries and textiles increased capacity use with shortages emerging in some areas like cement. Coal production has been hampered by floods and steel performance by recurring power shortages in the eastern region. The Economic Times survey of the public and private sector firms shows that the 25 largest houses have about the same proportion of industrial assets at 18 per cent between 1972 and 1976, that their profitability has declined, while taking the public and private sector as a whole their profitability increased, with a larger increase in private sector. The government's economic survey shows that in 1977-78 gross capital formation at 21.3 per cent (of GDP at market prices) was lower than in 1976-77 at 21.8 per cent, gross domestic saving was also lower at 22.4 per cent in 1977-78 compared to 23.3 per cent in 1976-77, and in both years savings were higher than capital formation. Similarly net domestic capital formation in 1977-78 at 16 6 per cent was lower than in 1976-77 at 17.2 per cent and net domestic saving also in 1977-78 lower at 17.8 per cent than the 18.7 per cent saving in 1976-77. The survey explains the decline in capital formation in 1977-78 as being entirely due to a sharp fall in inventories of food, steel and fertilisers in the public sector

and predicts that the rate of capital formation will be higher in 1978-79. It also points out that savings continue to be higher than capital formation though the gap narrowed in 1977-78 compared to the previous year and while savings are expected to increase in 1978-79, the gap with capital formation will narrow due to a negative factor-the deceleration in foreign exchange reserves it says. The increase in foreign exchange reserves for the first 10 months April-January 1978-79 declined to Rs. 582 crores compared to the previous year's Rs. 1,096 crores. On investment, a private research study estimates an increase in the private corporate sector by 6 per cent in 1978 over 1977, based on an analysis of the projects sanctioned by the All India term lending institions, which was Rs. 1,014 crores compared to Rs. 955 crores in the previous year. The projects sanctioned in 1978 will involve a capital cost of Rs. 745 crores and if those to be sanctioned in 1979 are added, it will be less than the Rs. 1,100 crores capital cost in 1979. Investment is not picking up as fast as forecast by the survey. There is special emphasis on the remarkable price stability where the wholesale price index for 1977-78 registered a rise of 5.2 per cent and for the first 9 months, April-December, 1978 showed a decline of 0.6 per cent. Food articles were cheaper, while manufactures like basic metals, rubber and rubber products, leather and leather products rose. But the consumer price index rose by 4.4 per cent during this period and the explanation that this is due to difference in the index base is not credible, the real explanation being that the difference between the wholesale and retail price index represents the middleman's and trader's profits which the government should control. The suryey also calls attention to the sharp increase in money supply: in the period April to January 12, money supply increased by 12 per cent in 1978-79 compared to 8.1 per cent in that period in 1977-78 due mainly to the increase in bank credit to the commercial sector which increased by Rs. 3,347 crores compared to Rs. 1,750 crores in the previous year. Table 1.11 sets forth the per capita availability of certain consumption goods, where apart from the low levels of the availability of edible oils, vanaspathi, sugar, fibres, tea and electricity, there was a fall in the availability of cotton cloth and coffee in 1977-78 compared to 1976-77. Tables 3.1. 3 2 give the employment situation in the public sector (144.02 lakhs) which was an increase of 6 lakh persons and in the private sector at 70.40 lakh persons involving a marginal increase of 1.8 lakh persons. In fact, the private sector employment has been stagnant at 67-68 lakh persons since 1971. On the labour relation front, the survey reports, the number of mandays lost was 22.2 million in 1977 and 11.2 million in the first six months of 1978. The balance of payments position is reviewed starting a 21 per cent increase in imports between April — November 1978-79 and a continuing decline in exports, though at a lower rate, compared to the previous year. The survey ends on an optimistic note in stating that the Draft Five Year Plan has got off to a good start and the industrial growth will be achieved, irrigation aimed at 17 million additional hectares, the possibility and the necessity to mobilise additional resources, while doing everything to control the exponential growth of population.

VI Plan: The National Development Council met at the end of February to decide on the principles to be followed in allocating Rs. 2,000 crores which have been clipped from the centrally sponsored projects (see last issue P 129). A viable principle for distribution of the resources among the states would be for 70 per cent to be distributed as income-adjusted-proverty-population (IAPP) norm, that is total population multiplied by the poverty ratio and increase of per capita income, with the other 30 per cent distribution in proportion to the outlay on irrigation, the revised minimum needs programme and rural development. Under this formula the

richer states get a normal share — Andhra Pradesh Rs. 69 crores, Gujarat Rs. 24 crores, Haryana Rs. 44 crores, Maharashtra Rs. 140 crores, Punjab Rs. 78 crores, while the poor states will get more — Bihar Rs. 166 crores more, Orissa Rs. 77 crores more, Tamil Nadu Rs. 26 crores more and West Bengal Rs. 8 crores more. Kerala and Karnataka get neither more nor less. After 4 days of wide ranging discussion, NDC finally decided to (a) reduce the centrally sponsored schemes from Rs. 6,000 crores to Rs. 3,350 crores and (b) to distribute the Rs. 2,650 crores (actually Rs. 2,000 crores as Rs.650 crores have already been allocated in 1978-79), according to the above income adjusted to tatal population formula based on the multiplication of the population by the increase of the per capita income of each state. This formula favours the poorer state. Uttar Pradesh which would have received Rs. 324 crores of the Rs. 2,000 crores under the Gadgil formula now receives Rs. 424 crores, Bihar from Rs. 224 crores to Rs. 300 crores, Tamil Nadu from Rs. 131 crores to Rs. 150 crores, Madhya Pradesh gaining Rs. 8 crores, Orissa Rs. 23 crores and West Bengal Rs. 2 crores, while Maharashtra gets Rs. 128 crores instead of Rs. 213 crores, Andhra Pradesh and Karnataka get Rs. 13 crores less each, Haryana Rs. 25 crores, Punjab Rs. 38 crores, Rajasthan Rs. 12 crores and Kerala Rs. 2 crores.

Prices : The Index number of wholesale prices for January remained at about the same level as that for December, with a marginal decrease of 0.4 per cent at 184 on January 27, 1979. Earlier it was noted that the retail price index does not show the same stability, registering a continuing upward movement. The largest decline in wholesale prices of a 7 per cent fall was registered in January for pulses and rape and mustard and oilcakes followed by a 6 per cent decline in mustard oil, niger seed, 5 per cent decline in rice bran oil, 3 per cent decline in spices and condiments, raw tobacco, Khandasari and cotton seed, while raw wool prices rose by 20 per cent, fish by 16 per cent, tanning materials by 5 per cent, lubricating oil by 4 per cent, silk, raw skin by 3 per cent with fuel and power and manufactured products remaining steady. Non metallic minerals rose by 0.1 per cent, textiles by 0 6 per cent and the machinery and transport equipment group by 0.8 per cent. As usual government measures in January and February and other actions helped or hindered inflation. The curbs on bank liquidity imposed by Reserve Bank of India in November (see Vol IX p. 9) is seen now to have been rather harsh and hasty as there was a pickup in industrial business activity at this time in relation to which credit expansion was not large The advances between March and November, 1978 at Rs. 1,427 crores were only 35 crores above the advances of Rs. 1,392 crores in that period in 1976, though it was seemingly large compard to the 1977 figure of Rs. 501 crores. 1977 was, however, a slack year. The growth rate in money supply with the public during 1978-79 will be a little lower than that of 1977-78, on the basis of the first nine months data in 1978-79, when it was 11.2 per cent compared to 13.7 per cent in the first nine months of 1977-78. Also further to the scheme for production-cum-distribution of selected essential commodities referred to in the last issue (see page 130) to keep prices down, the government reported that there are 2,41,300 fair price shops, of which 1,87,800 are in the rural areas, 67,500 of which are being run by co-operatives. To ensure price stability, production has had to be expanded and for this the government has announced support prices for wheat, paddy, gram, groundnuts, soyabean, sunflower seed, mustard seed, arhar, moong and raw cotton. In the case of pulses the basic problem is the inadequate availability at around 11-12 million tonnes, though a start has been made to procure some quantity of pulses through the National Agricultural Co-operative Marketing Federation and some state level agencies and distribute them through cooperatives.

The Union government is also finalising a buffer stocking scheme for several commodities and entrusting responsibility to FCI for wheat and rice, Union Petroleum Ministry / IOC for kerosene, Department of coal for soft coke, NTC for common clothing and a new public sector for oil and oil seeds. The government also points out that the effect of the increase in railway freight rates earlier referred will be a per quintal increase of 14 Paise for rice and wheat, 16 paise for pulses, 34 paise for edible oils, 35 paise for gur and khandasari, Rs. 1.75 for urea, 11 paise for sugar, 11 paise for bitumen and coal tar and per tonne Rs. 4.50 for coal, Rs. 15 40 for iron and steel, Rs. 5.50 for iron ore, Rs. 1.90 for manganese ore and 0 7 paise for one litre of kerosene. On the other side of the inflation facet, the Union Government announced in February a moratorium up to 18 months on interest and principal repayments to nationalised banks by tiny sector industries. The really serious inflationary pressure is the series of deficit budgets of the state that have been announced in February—Andhra Pradesh with a defict of Rs. 74.86 crores and no taxes, Gujarat with a deficit of Rs. 41.10 crores with little extra taxation and on top as the Economic Survey reports, the Union has had to provide Rs. 852 crores to the states to cover over drafts with RBI and meeting relief expenditures on account of floods. The RBI review of the finances of state governments during 1974-75 to 1978-79 in the September 1978 bulletin emphasises: a) the increase in state budget deficits in 1977-78 to Rs. 290 crores and in 1978-79 to Rs. 372 crores, b) their reliance on net loans from State Bank of India and other banks, c) their increasing resorts to unauthorised overdrafts from RBI in contravention to Article 293 (3) of the Constitution and Section 21 (A) of the agreement entered into in RBI Act, d) the measures taken by the Union government to correct the situation—the special loans and the regulation of overdrafts of the states. One answer to this inflationary situation is the Economic Survey comment that the States should now really do more to raise resources than in the past and with the generous Seventh Finance Commission's recommendations, State finance should be more orderly and cease exerting an inflationary pressure.

Public Sector and large houses performance: The Annual Report of the Public Sector undertakings for 1977-78 shows a fall in profits of the 142 operating undertakings from Rs. 476 crores in the previous year to Rs. 236 crores and in the rate of investment growth from 23 6 per cent in 1976-77 to 15.8 per cent in 1977-78. The decline in profits is attributed to industrial unrest, power shortage, withdrawal of price preference for public sector undertakings and recession in the world freight market. The total investment in the 153 undertakings in 1977-78 amounted to Rs. 12,851 crores and their foreign exchange earnings amounted to Rs. 1,562 crores. The Department of Company Affairs reports that all the 81 large industrial houses incresed their assets and turnover between 1972 and 1976. Tatas increased their assets by Rs. 338 84 crores and their turnover by Rs. 454.44 crores, Birlas by Rs. 385.21 crores and 532.04 crores, Mahindra and Mahindra by Rs. 67.51 crores and Rs. 70.40 crores and Hindustan Levers by Rs. 44.64 crores and 101.52 crores. As on June 30, 1978 the 81 large undertakings comprised 1,090 undertakings and 26 single undertakings covered by MRTP Act and being examined by the Asoka Mehta Committee.

National Production Front:

Steel: In January, Boakaro produced 1,14,000 ingots (the highest ever) and IISCO 61,200 tonnes of ingots, Bhilai where work is on for increasing capacity from 2.5 million tonnes to 4 million tonnes and on which Rs. 400 crores out of a total project cost of Rs. 1,400 crores have been spent reports that it can increase further its annual ingot steel output from 4.8 million to 5 5 million tonnes with an additional investment of Rs 200 crores. In 1978-79 about Rs. 125 crores have been spent on expansion work under which

30,000 cubic metres of concrete work is being done every month. The first phase of the on going expansion of the Alloy Steel Plant at Durgapur from 1 lakh tonnes to 1.6 *lakh tonnes of ingots per year will* be completed by the end of 1979 at a cost of Rs. 8.46 crores and in the second phase the expansion will be from 1,60,000 tonnes to 2,60,000 tonnes at a cost of Rs. 47 crores providing a continuous slab casting machine. The Alloy Steel Plant increased its capacity use to 101 per cent in December, But the September floods caused a production loss of Rs. 3.6 crores. Discussions have begun with a French agency for setting up a coal based steel plant at Mangalore. According to trade sources there was an acute shortage of a number of steel items such as rounds, bars, ingots, structurals in January and as a result their prices are up by 15 per cent. *It may be that this is a reflection of pro-* duction of the six integrated steel plants being lower by 0.88 million tonnes from the target of 4.26 million tonnes. The Steel Ministry's target for the year is 7 million tonnes. The Ministry decided to make a fixed quota allocation to private trade to relieve the shortage. The Planning Commission has allocated Rs. 600 crores for the expansion, modernisation and development of the steel sector in 1979-80, which is a reduction of Rs. 146 crores over what the ministry requested, Bokaro and Bhilai bearing the brunt of the reduction. The Ministry's exercise show that the country will have to plan for a minimum capacity of 50 million tonnes by the end of the current century, which is 10.6 million tonnes at present and is expected to increase to 20.4 million tonnes by 1987-88 to meet the demand level of 15.9 million tonnes of finished steel at that time.

Crude : The prolonged disruption of operations in the Barauni refinery led to a daily loss of about 6,000 tonnes of refinery products which had to be imported at a high cost of Rs. 80 crores and led to diesel and kerosene shortage as well as fuel *oil scarcity which are expected to be* 30,000 tonnes in March. The Petroleum Ministry is considering whether it might not be necessary to restrict commissioning of petroleum products from its current growth rate of 9-10 per cent. Soviet supplies of the 1.2 million tonnes were interrupted in January and February because the Soviet Union had to make internal adjustments for the stoppage in the supplies of gas from Iran and due to the disruption in port operations in the Soviet Union following the severe winter. It has also to make good the shortfall in crude supplies in 1979 which may exceed the 4 million tonnes extimated earlier. It expects 12 million tonnes from Iraq, Saudi *Arabia, and United Arab Republic out of* the import needed of 16 million tonnes and if the 4 million tonnes shortfall is not made up or if there is any interruption in the flow of the assured 12 million tonnes there will be a serious shortage in the second half of 1979. To meet the country's growing demand for petroleum products, the study group of the ministry has recommended the creation of an additional petroleum refining capacity of 10.5 *million* tonnes per year during the current plan period and over and above the present annual refining capacity of 30 million tonnes plus increase of the 6 million tonnes when the Mathura Refinery is commissioned at the end of 1979 Norwegian collaboration is being negotiated for the country's offshore exploration programme, using its specialised sub sea equipment. During February India also negotiated with Kuwait for additional crude exports. At this time Saudi Arabia, Abu Dhabi and Qatar announced increase in crude prices from 7 to 14.5 per cent while oil supply from Iran completly stopped. Oil India's off-

shore drilling programmes of Mahanadi has had to be delayed because of the delays in delivery of equipment and in the commissioning of the sea bed survey. The drilling will now start in September instead of at the planned March. The final round of talks for the take over of AOC is expected to start at the end of February with the decision by the government on its position with regard to concessional supplies of crude oil to AOC's Digboi refinery by Oil India.

Coal : The Ministry reports that coal production has been picking up, the January production being 8 8 million tonnes, pithead stocks being 17 million tonnes and Coal India holding 9.6 million tonnes of middlings at the washeries to be used by brick kilns and power stations. Production for the ten months April to January 1978-79 is estimated at 81.4 million tonnes. Meanwhile there are a number of problems arising from this sector. The usual lack of co-ordination between the Railways and Coal India results in shortage of several types of coal to Eastern India industries and general customers and so the minister held high level meetings with the Railway Board and Ministry officials and his own officials to expedite the movement of coal to industries. In mid February it was reported that coal supplies had to be restored to fertiliser plants in the northern region by the Railways to counter the suspension of production at Nangal and trial runs at Bhatinda and Panipet units. Similarly several thermal power units in Uttar Pradesh, 36 textile mills in Ahmedabad and the integrated steel plants report serious coal shortages and daily hand to mouth existence. Another issue taken up in February was the much delayed reorganisation of the Jharia coal fields, the sole producer of the much needed coking coal for the steel sector and whose delay involved the 1 million tonne coking coal import. The reorganisation was first taken up in 1971 and the last meeting on it was held in August 1976, involving a massive investment of Rs. 1,636 crores over a period of 15 years. The debate over whether the open cast mining technique should replace the prepated 42 underground mining blocks has been holding up a decision. Now a meeting has been called in March to arrive at a decision and in the meanwhile a phased programme in 3 stages of the modernisation of existing mines is to be under-taken. The modernisation of the underground coal mines has been reviewed again with the visiting British coal mining team and the next step agreed upon—another problem facing the industry is the shortage of explosives needed for underground coal mining, resulting in a daily reduction of 50,000 tonnes in the coal prodution of BCCL and ECL from February I. STC has to speed up the import of this vital input to the coal sector.

Iron ore and other metals : The slow offtake of iron ore by the Japanese steel mills have resulted in pile-up of NMDC stocks of 2 million tonnes in the stock yards in Bailadilla and Vizag port. As against the 51.9 million tonnes that should have been exported by the middle of January, only 42.5 million tonnes have been exported. The prospects of Japanese steel mills entering into a further long term agreement to buy our ores are being explored. Despite the delay and some decline in exports of Japan, MMTC expects to export 13 million tonnes of iron ore in 1978-79 despite the recession in the world steel industry due to the opening up of West Asian and Chinese markets. During April-December 1978 total shipments of iron ore by the Corporation have been 9 68 million tonnes. Meanwhile India, Australia and Brazil have decided to join hands as

the three *leading iron ore* exporting countries (see vol. VII p 11) to obtain a remunerative price for the metal starting with a rise of 22 per cent in the price of the metal exported to Japan. Following *widespread complaints* that units were not marketing and pricing the product as laid down by government, the Ministry of Steel and Mines announced that it is reimposing distribution control in aluminium units. *Hindustan Copper reports* that due to attention of its technological problems, the smelters at Ghatrila and Khetri during November 1978 and January 1979 have produced over 100 tonnes of blister copper per day, involving 70 per cent of capacity use. With the correction of its excess generation of reverts and recouping of its average realisation price, HCL estimates that in 1979-80 it will produce 32,000 tonnes of blister copper and make a profit of Rs. 5.8 crores. Hindustan Zinc reports an increase in its turnover from Rs. 24 crores in 1976-77 to Rs. 38 crores in 1977-78, producing 33,501 tonnes of zinc and 7,543 tonnes of lead and a profit of Rs. 1.82 lakhs. To meet the large increase in the demand for nonferrous metals in 1978-79, MMTC has more than doubled copper imports (from 33,351 tonnes in 1977-78 to 83,000 tonnes in 1978-79,) increased Zinc imports from 30,000 tonnes in 1975-76 to 43,000 tonnes in 1977-78 and is importing the entire supply of tin, lead, and nickel of which there is no indigenous production. The Department of Mines announced in February the approval of 33 research and development scemes for Rs. 10 crores, ten for HCL for improving the quality of copper, for the setting up of a geo data centre for mineral and earth sciences under GSI and for the promotion of indigenous knowhow for the production of alumina.

Sugar and Cotton: ISMA reports that the sugar industry incurred a loss of Rs. 270 crores during the last season, which was the result of the average prices being Rs. 190 per *quintal*, while the cost of production was as Rs. 235 per quintal excluding excise. It reports that even during the current season when the factories have been paying only the statutory minimum cane prices, the cost of production, works out to Rs. 218 per quintal and the realisation being Rs. 170 per quintial. Hence the Association announced in February that from March there would be the scheme of voluntary regulation of supply of sugar in the market by the industry. The steering committee comprising representatives of the private, public and co-operative sectors decided that for March the release would be 4.25 lakh tonnes. The result of this decision on prices to the consumers and the supply situation will need to be watched. In February, the Union government withdrew the obligation on textile mills to use a minimum of 10 per cent man-made fibres and allowed the mills to carry larger stocks of cotton. It has also direct CCI to buy 15 lakh bales of cotton instead of the earlier target of 12 lakh bales. The estimated production of cotton in the current season is 68 lakh bales and these measures (together with a possiblility of some cotton exports) are expected to keep prices from falling seriously.

Automobiles and Fertilisers : Hindustan Motors announced in February that it has applied to the government for acquiring a new die for a new model car and is negotiating with US and European automobile manufacturers. The cost of new die and charges for engine etc. will be Rs. 6 crores and the new car will take about 3 years to come on the market. The economies of this industry is that a new model appears after every 1 million cars have been sold (about 3-4 years in other countries, whereas with Hindustan Motors

producing less than, 20,000 a year, the period is much longer); the unit does not generate a surplus and reports accumulated depreciation arrears of Rs. 9.08 crores as on March 31, 1978, the government through its levies is responsible for over 50 per cent of the cost of the car (in other countries it is 20-25 per cent); and at present 70 per cent of the demand is by institutional buyers, 10 per cent by taxi owners and rest by individuals. The industry contributes Rs. 2,500 crores a year to the exchequer and employs 15 million workers and its future depends on resolving the question whether it is perferable to import technology and allow local production by licencing foreign manufacturers or build up and use existing automobile plants in this country. Further, to the earlier reference to the shortage of coal to which shortage of naphtha should be added, the resulting suspension of production in the fertiliser plants is estimated by the ministry at Rs. 6 crores. A delay in one month in commissioning the projects like Bhatinda and Panipet referred to earlier means an increase in standing costs by Rs. 2 crores. On the assumption that these disruptions caused by coal supply shortage will be corrected, the Fertiliser Association can compute that for 1979-80 there will be a gap of 7,99,000 tonnes of nitrogenous fertiliser and 2,28,000 tonnes of phosphatic fertilisers, which will have to be met by imports.

Irrigation : The Fourth Conference of Irrigation Ministers meeting in Trivandrum in February received the recommendation of its working group for an investment of Rs. 8,200 crores for major and medium irrigation for that plan period, to which the Union Minister proposed some 5-10 per cent should be added to guard against possible slips and achieving the target of 17 million hectares (8 million hectares under major and medium and 9 million hectares under minor schemes) and bearing in mind the country's foodgrains requirement of 230 million tonnes for its population of 900 million by the end of the century. The conference recommended : (a) provision of needed funds in the Annual plans to attain the target of an additional 8 million hectares during 1978-83, (b) the state government should set up machinery to execute time-bound physical and financial schedule, (c) to improve the unsatisfactory rate and state of modernisation of irrigation projects, project reports should be formulated by 1979, (d) Union and States should set up mechanical organisations to advise on epuipment planning and plant layout, (e) states should set up cost control cells for all projects covering more than Rs. 30 crores, (f) master plans for flood control and drainage should be prepared and completed within the next four years, (g) a mass movement for the terracing of agricultural fields in the hills, using the food for work scheme for this, and (h) the organisation of studies by the states to evaluate the impact of irrigation projects on socio-economic development and on the environment. The Union Ministry has suggested to the state government the setting up of captive cement factories for large irrigation proiects to overcome the nonavailability of cement, which is the biggest obstacle to completion of the project on time. The other methods such as giving priority to irrigation in cement use (the Department has requested 4.5 miilion tonnes and the cement controller has allotted 1.3 million tonnes for the first quarter) is alright as a short term measure. But for long term captive cement plants for big irrigation projects and the use of hydraulic lime in place of cement are to be seriously examined.

Agricultural Production: Food Corporation of India reports that kharif cereals including rice and coarse grains procurement in the 1978-79 marketing season upto February 3,1979 was 4 2 million tonnes (4.13 million tonnes of rice and 69,179 tonnes coarse grains) compared to the previous years years 3.2 million tonnes. Of the total rice purchases of 4.13 million tonnes Punjab contributed 2.26 million tonnes, Haryana 0.6 million tonnes and Andhra 0.32 million tonnes. On the rabi prospects, widespread rains in the northern region have raised hopes that wheat output would be 32 million tonnes while the mustard and gram crop target may not be attained. The outlook for a rape seed and mustard seed are good and all crops have profited from the absence of frost damage, pests and the easier availability of diesel in Punjab and Haryana and fertilisers in Uttar Pradesh, Bihar reports an estimated increase in food production of 112 lakh tonnes for the year with cooperatives having financed rabi cultivators to the extent of Rs. 83.42 lakhs and commercial banks Rs. 14.50 lakhs. The Union Ministry reports that jute production for 1978-79 is a high 64.54 lakh bales of 1,180 Kgs each (a 20.4 per cent or 10.92 lakh bales increase over that of 1977-78) with the combined jute and mesta production being 81 lakh bales. Of the additional 10 92 lakh bales production West Bengal accounts for 6.59 lakh bales and Assam 3.54 lakh bales. On the problem of the country's shortage of oils and fats, ICAR proposes an integrated production strategy involving increased output from all major sources—the perennial oil seed plants like coconut and oil palm, annual oil seeds like groundnut, rape and mustard, minor oil seeds like sal, neem and Karanjacord extraction through technological process from rice bran, maize germ and cotton seeds. The total production of major edible oil in the coutry is estimated as 2.5 to 3 million tonnes per year, while internal demand by the end of the plan period is estimated at 4.4 million tonnes. There is also the problem of increasing the per capita consumption from the narrow 11 grams to the recommended 30 grams a day. On the increasing production strategy, the most important perennial oil seed plant—coconut—raises the question of breaking the barrier of the stagnant yield of nuts per hectare. This together with all aspects of post harvest technology forms the most urgent R & D problem. In palm oil, Kerala can bring 25,000 hectares under cultivation and produce 50,000 tonnes of palm oil 7,000 tonnes of kernel oil and 7,000 tonnes of meal. The Union cabinet decided in February as a follow up of the Rajkrishna Committee reports to include all land reform laws in the Ninth schedule of the constitution to protect them for challenge in a court of law, to request state governments to accelrate disposal of land reform cases and to ask the states to distribute promptly all acquired surplus land according to guidelines.

Exports: The trade deficit for nine months, April to December 1978-79, amounted to Rs. 784.89 crores, with exports at Rs. 3,909 crores and imports at Rs. 4,693.97 crores. The decline in the overall export was marginal at 1.1 per cent compared to that period in the previous year. The major declines have been in tea, cashew kernel. coffee, pepper, oil cakes, steel, cement and cotton piece goods. The usual explanation given is that some exports like tea have declined because of contraction of foreign demand, others like steel, cement, and cotton piece goods declined because of domestic demand pull (which is not the true explanation) and still others have faced recessionary conditions and protectionist trends. Export of cotton garments, engineering

goods, handicrafts including gems and jewellery, leather and leather goods, silver, sugar and marine products have registered considerable increases, as will be presently noted. From early February government allowed the free export of potatoes because of the plentiful supply, and in view of the slump in silver prices, silver exports which were buoyant were banned from February; exports of gems and jewellery increased by 36 per cent at Rs. 213 crores during April-July, cotton garments increased by Rs. 78 crores and engineering goods by Rs. 39 crores. Sea food exports recorded a high 78,000 tonnes, earning Rs. 210 crores. STC which till end of January 1979 had exported Rs. 608.3 crores announced that it will operate on a no profit, no loss basis to prospect new markets particularly in Africa. India has secured a purchase order from Indonesia for 2 million tonnes of high quality direct reaction pellets. Efforts are being made to make available information on India's engineering goods capability to the EEC countries to whom India's engineering goods exports are a mere $ 90 million against EEC engineering goods imports of $ 110 billion. India-Korea decided in February at their bilateral discussions to double the trade turnover between the two countries, which now stands at Rs. 31 crores. Similarly India and Sri Lanka have agreed to expand trade between the two countries. Castor oil exports for 1978-79 are expected to be 53,000 tonnes against the year's target of 50,000. Similarly the exports of minor minerals like barytes, bauxites, betonite and fuller earth, cromite, felspar, graphite, gypsum, ilemnite etc. which are expanding are expected to earn Rs. 300 crores per annum by the end of the Plan period. In order to avoid causing hardship to exporters and in view of the large number of applications received, the government decided to bring forward some portion of export quota of textiles, made from cotton, wool and man-made fibres earmarked for the second half of 1979 to the United States. There are also rather grim factors in the export picture such as the real possibility of garment exporters losing the Japanese market because of the substandard products supplied by some firms. The real cause and disturbing one at that in the trade deficit picture is the substantial increase in imports, particularly POL, fertilisers, edible oils. capaital equipment, steel, nonferrous metals, mill made fibres. Here again as a result of the streamlined precedures and a substantial expansion of the items under OGL, the number of import licence applications has begun to decline to 1 lakh in 1978-79 against 3.5 lakhs in 1977-78. And among the important measures being taken by the government to step up exports are : a) the redefinition of the role of export organisations like STC, MMTC, TAD, etc to make them action oriented and export small and cottage industry products, (b) streamlining the procedures of export promotion councils to make them play a dynamic role, (c) the promotional role given now to the Chief Controller of imports and exports, (d) the effective work of the task forces in the 9 areas, (e) the emphasis on exports of value added items, (f) the provision of essential inputs at reasonable prices, (g) import liberalisation to provide exporters with machinery and raw materials, (h) provision of cash compensatory support, (i) strengthening the production base to increase exportable surpluses, (j) priority allocation of funds to the plantation crops sectors—tea, coffee, rubber, cardamom etc.—to promote their exports as well as fresh fruits, vegetable etc., (k) greater involvement of state governments in the export push, (l) inward and outward quality control regulation and free shipment inspection, (m) promotion of joint ventures, (n) improved transport infrastructures including air cargo complexes

and shipping cargo and (o) development of selected free trade zones and intensified efforts in multinational forums ('Eg: UNCTAD and GATT) and in bilateral negotiations. The US dollar fell steadily leading to the view of some that the dollar was overvalued and others that it was responding to signs of improvement of US foreign trade in the near future.

International :

World Monetary Reform: The Iranian political changes in February and the stopping of its oil exports led to a rapid rise in the price of gold in the international money markets. The price of gold shot up to $ 244.50 per ounce on February 6, surpassing the previous record of $ 243.65 per ounce on October 31. All European exchange rates, as well as the dollar rate reflected in February this upward move of gold price.

III Development Decade: The UN Committee to develop the International development strategy for the III Decade-the 1980 - (see last issue p 142) elected India as its Chairman, Byelorussia and Argentina as its Vice Chairman and Sweden as its reporter. The dialogue and debate between the rich and poor countries will start all over again, with the latter committed to develop a III Decade strategy and link it to the New International Economic Order. The industrialised countries are opposed to both and reluctantly gave in to the third world countries' demand.

MNC Code: The 48 nation committee headed by LK Jha set up by the UN Economic and Social Council in 1976 to draw up a global code of conduct to minimise the negative efforts of multi national corporations (MNC) met once in 1976, twice in 1977, thrice in 1978 and plans to complete its mandate in 3 meetings in 1979. At a meeting in January 1979, a skeleton framework outlining the contours of a code has emerged covering the activities of the Corporation in the economic, financial and social fields, in which the first need has been identified as one of disclosing information. The lack of accurate information on the MNC has been a major issue. While the MNCs' activities at the national level can be regulated by national policy and legislation, it is their global policies which are important and which require international action and machinery. One other question under discussion is whether the code should be voluntary or binding. Work is being done on taxation of MNCs by an expert group and by UNCTAD on restrictive business policies and transfer of technology. ILO has completed a part of the code on employment and labour. There is disagreement on the question of nationalisation and the compensation to be paid.

World Commodity Fund: 80 third world countries meeting in Arusha, Tanzania in February agreed on the financing of a common fund to stabilise commodity prices. It was agreed that all countries should pay $ 1 million each into the fund, a proposal which originated with the African group. This important recommendation will be presented to the UNCTAD session in Manila in May. The Arusha decision criticised the industrialised countries for not moving towards the acceptance and implementation of the new Industrial Economic Order and called attention to the danger to international cooperation through failure to achieve concrete results before the Manila meeting.

World Economy: The World Bank's World Atlas for 1978 shows that the economic recovery of 1976 tapered off in 1977 both in industrialised and developing countries, except for the countries of South

and East Asia where recovery continued quite strongly. Data on population, GNP, and per capita GNP show that the middle income developing countries lost much of the momentum they gained in 1976 after the 1974-75 recession. The Atlas reports that there have been no important changes in global distribution of income in 1975-77. In 1977, the oil importing developing countries with 33 per cent of the world population accounted for 7 per cent of world GNP, whereas the industrialised countries with 17 per cent of the world's population accounted for 63 per cent of world GNP. UAE, Kuwait, and Qatar continue to be the world's richest countries in 1976 with a per capita GNP of over $ 10,000 followed by Switzerland, Sweden, Canada, US, Norway, Denmark and West Germany. About a quarter of the world's population lived in poor countries with a per capita income of less than $ 200 in 1976, and an average GNP per capita of $ 140. Another third had a per capita income of $ 350. In contrast one-seventh of the total world population belonging to the rich countries had an average per capita income of $ 7,070. 24 per cent of the world's people were in countries with a population growth rate of less than 1 per cent annually and another 32 per cent were in countries with a 1-2 per cent population growth rate. 22 per cent of the population were in 79 countries where it was growing at a rate of 2.5 per cent or more.

World Food and International Wheat Agreement : FAO's commodity review and outlook for 1978-79 states that there will be complete supplies of food and other agricultural commodities in 1979. In cereals because of large 1979 harvests, demand will slacken and carryover stocks in exporting countries will be high. Rice prices which began declining from last year's high levels will fall further, but wheat prices will hold steady because of large demand and the US grains reserve which has removed surplus supplies from the market. Cotton production is likely to decline, its supply reduced and so the price likely to be stabilised till mid 1979. There will be food shortages in some of the African and South East Asian countries. Wheat prospects are poor for China but good for India and Pakistan. The 70 nations conference meeting in February in Geneva, despite a special week's prolongation broke up without reaching agreement on an International Wheat Agreement because of two basic disagreements between the US, the developing countries and the EEC. The first related to prices. The developing countries offered a minimum world price of $125 to $130 per tonne and a maximum of $ 160 to $ 180 per tonne. The US, which started with $ 215 per tonne finally set a minimum of $ 140 and a maximum of $ 200. After prolonged discussions and mediations, there was found to be no meeting point on this. The second issue related to the amount of wheat stocks to be held. Out of the proposed global stock of 22 to 30 million tonnes, the US is prepared to hold only 5 million tonnes and wants the EEC to increase its stock offer from 2.5 million tonnes to 4 million tonnes. When it was decided that each country would evaluate its ability and declare what size of stock it would hold, it was found that global stocks amounted only to 12.8 million tonnes Here again there was no meeting. Thus after 60 weeks of preliminary negotiations and three weeks of conference, the meeting broke up and the countries will have to live with the old and useless wheat pact.

ADB: The Asian Development Bank reports that in 1978 its loans exceeded $ 1 billion and it also in that year made its first loan in the field of public health. It raised its local cost financing for projects

to over $ 60 million. Its loans went to 18 developing member countries. By the end of 1978, ADB had lent $ 5.41 billion for 359 projects in 23 developing countries, of which $ 3.86 billion were ordinary loans and $ 1.56 billion concessional loans. The emphasis of the Bank's loans continue on agriculture (26.8 per cent in 1978) and on projects of high social impact.

Pepper Community: The Pepper Community formed by India, Indonesia and Malaysia had a 5 day meeting of its permanent techno-economic panel at Cochin in the beginning of May. It noted the main problems facing its international trade, namely, the foot rot disease, lack of data on productivity and availability of pepper for export with the producing countries, instability in export earnings due to sharp variations in prices, difficulties in obtaining access to industralised countries' market and lack of common marketing strategy. The meeting recommended: a) that member countries should obtain a common shipping contract for pepper exports, b) an in-depth study of the supply outlook and future demand for pepper in significant markets for the next 5-10 years, c) a study on improvement in production and productivity of pepper holdings in member countries and increase the gene pool of pepper to facilitate breeding work, d) development of farmers cooperatives to undertake domestic trade and pepper exports to ensure pepper cultivation on equitable share of the pepper price, and e) a secretariat study of packaging of pepper products as an integrated aspect of the pepper economy.

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II Agricultural Development

Paddy and other crops: Paddy farmers in the state are facing the problems attendant upon three successive national and state food grains crops. In February not much paddy moved from Thanjavur district to Kerala because that was the time when harvesting was taking place in Kerala and Kerala also was getting rice from Andhra Pradesh transported by rail which is cheaper than the road transport from Thanjavur. Also Kerala consumers now have a choice between Andhra Pradesh and Thanjavur varieties and they have become conscious choosers. The price of paddy ranged from Rs. 49/- to Rs. 56/- per bag of 57 Kg. for fine varieties, Rs. 48/- to Rs. 53/- for medium varieties and Rs. 47/- to Rs. 52/- for coarse varieties. As paddy production is increasing year after year, the problem now becomes one of the Union and state governments developing a policy to deal with normalcy and relative abundance of paddy rather than scarcity and shortages. One of the policy issues relates to the price of paddy which apart being fixed at a lower level than that of wheat and so causing a rift between wheat farmers and

paddy farmers, also involved the question of paddy prices being fixed by APC on aggregate cost of production data which results in a single price for the crop giving weight to varietal differences but not to spatial differences. Besides price, there was also the farmers' status which had to be raised in the case of the majority who are small and marginal farmers and whose response to price changes was limited. There was also the problem of surpluses and their conservation and use. Another issue under discussion by farmers is the announcement by the state government that it intends to raise the share of the tenants from 60 to 75 per cent under the Fair Rents Act in lands cultivated under paddy. It is opposed by the large and medium land owners who used to get 65 per cent of the produce up to the thirties, reduced to 60 by Rajaji and to 40 by Kamaraj. It will benefit the 4 lakh tenants in Thanjavur district and will call for some similar protection to the 44.9 lakh landless labourers.

DPAP in Dharmapuri and Ramanathapuram: The Drought Prone Area Programme started in the drought prone backward Dharmapuri district in 1972 has given the farmer a new awareness and confidence in his ability to cultivate his land. The main instrument has been the irrigation facilities provided through medium irrigation projects, minor irrigation works, percolation tanks for stabilising the water table and the community irrigation wells, under which the wells are sunk by the Dharmapuri District Development Corporation at a cost of Rs. 50,000 each with motor pump and underground pipes to irrigate 15 acres. This enables the small and marginal farmers to grow 2 crops instead of the previous one, earn Rs 600/- and pay Rs. 175/- as water charges. 100 percolation tanks about half of them in the sugarcane area of Palacode and the minor irrigation works which is bringing 10,000 acres under cultivation and the Jarthalavu link canal scheme which by linking 8 canals and using Jarthalavu's surplus waters to irrigate 100 acres, are slowly transforming farming in the district. Soil and moisture conservation programme on watershed basis under which 35,000 hectares have had contour bunding built and the afforestation programme in Kavaramalai and Thoppur and pastures costing Rs. 15 lakhs over 1,500 hectares for sheep farmers and further developments. In view of the climatic conditions, sericulture is given top priority under which mulberry cultivation is being extended from 4,000 acres to 12,000 acres in the next 5 years, with subsidies to marginal and small farmers for training them in mulberry cultivation and silk worm rearing. The dairy component is two year old, has 150 cooperative milk producers' societies, with a daily collection of 35,000 litres, chilled at the chilling plants at Krishnagiri and Dharmapuri. Education and employment are also expanding, starting with the 50 demonstration blocks, each ranging from 25-50 acres where all modern farming techniques are used to educate the farmers. A similar DPAP result in the neighbouring equally backward district of Ramanathapuram where 10,000 acres of fallow and agricultural wasteland around Sivakasi is being brought under the latest soil and moisture conservation methods, tested crop rotation patterns, afforestation by planting drought resistant trees, and improving the water bed by forming percolation ponds and check dams—all at a small cost of Rs. 8 lakhs of which Rs. 2.5 lakhs will be recovered from the 1,250 ryots benefiting from the programme in 15 villages. Successful dryland farming operations are raising sunflower, cumbu, garden crops, lakshmi cotton. This 10,000 acre demonstration which includes the farmers in cultivation by getting their consent,

training them and making them do the cultivation should spread to the 4 lakh acres of cultivable land in the district. Here again the outlook of the farmer is changing and this is spreading and should be helped to do so over the whole district.

Research Results : The Sugarcane Breeding Institute in Coimbatore released in 1978 twelve hybrid varieties of high yielding, disease resistant and good juice and quality sugarcane as CO 7801 to 7812 supplying 32 research centres with these varieties. The possibilities for raising 3 short duration crops of sugarcane instead of the usual two in a three year period by using short duration varieties—COC 671, COA 7601, CO 7201 and CO 7204 were also released. A fast growing mutant with high yield potential was isolated from gamma irradiated material of CO 527 is being evaluated in advanced tests, and a red screening test for identifying the ratooning ability of some types are being developed. Other results of the Institute's research are the demonstration that deep irrigation saves 40 per cent of water with no loss of cane quality and a parasite which checks the shoot borer found in the Madhuranthakam cooperative sugar factory area. In the state, the Department released 5 new high yielding paddy strains evolved at Aduthurai Research Station which can be used for the samba and Navarai crop with a 4 month duration except for the super fine Nellore variety which requires 6 months, and a sixth variety developed at the Ambasamudram research wing. The yield of these varieties is in the order of 1.5 to 2 tonnes per acre as against 1.25 tonnes in ordinary varieties. The use of CR 146-225, a super fine variety of paddy of excellent cooking quality, for the kuruvai season in Thanjavur district means that this variety which takes 105-107 days unlike ADT-3 and other varieties which take 90 days can be sown in late June or early July. It then can be harvested in September so that the long duration of Thaladi can start in October. This however, will interfere with thaladi sowing. Hence there is need to identify a 75 days high yielder in the fields. One of the varieties included in the 1977 Aduthurai trials—CRM-13-3241 is of 75 days duration and yields 5 tonnes per hectare and could be crossed with other high yielders such as CR 146-225, ADT 27, Karuna, Karikalan etc. and used for a 85-90 day duration variety under kuruvai cultivation. The country's and state's paddy crop faces a number of virus diseases—leaf yellowing tungro virus, transmitted by the green leafhopper, the grassy stunt disease and the ragged stunt disease which has appeared in Coimbatore. Apart from the destruction of all the alternative hosts of virus, rice varieties IR 28, IR 29, IR 30, IR 32 and IR 34 are resistant to tungro but susceptible to grassy stunt disease. Hence there is need for research on varieties which can resist both diseases along with use of insecticides to check the growth of green fassids or the brown plant hopper through which the virus diseases are transmitted. Another area where research is going forward is preserving as germ plasm the local paddy varieties which are being replaced by HYV hybrids—which is the aim of All India Coordinated Research Project on Germ Plasm Collection. Nilgiris wheat faces the stem and leaf rust diseases and to meet these diseases a rust resistant variety HD 2135 has been developed by IART and has been successfully grown in Wellington and Kodaikanal which now replaces the local varieties. It matures in 120 days (against the local choti lerma needing 135 days) and yields 1,500 to 1,700 Kg. per hectare (compared to 1,250 Kg. from choti lerma). Another area needing research attention is the need to increase pulse output on which the following are being acted upon

are considered : collection and evaluation of indigenous pulse varieties and a research centre to develop them; more intensive field oriented studies on physiology of nodule development, and assessment of various agronomic policies including mixed farming in the control of insect pests in different agro-climatic conditions. A spreading type groundnut—M-13—evolved by PAU is now doing well with an increase of 12-41 per cent of the yield over the best varieites used in this state, points to the need for its being adapted and used in this state. Improved tuber crops—tapioca, an important industrial raw material in this state which has new high yielding and rich varieties released by the Srikaryam Centre should be used in the state; the two open pollinated progenies of sweet potatoes should also be propagated among backward farmers in the state and the disease free potato hybrids, JE 303, EM/H-1602, JF-4841 and JF-4810, also need to be diffused in all the potato growing areas of the state. On sunflower growing TNAU research show that July-August is the best time for sowing it as a dry crop and the variety EC-101495 well suited for both dry and irrigated farming and when grown mixed with cowpea C-152 yields an increase in return of Rs. 200 per hectare. Another research issue is the hormonal disease from which the poovan banana in the state is beginning to suffer, particularly the farmers in the Erode area. Spraying operations and separating the affected plants from the rest of the plantation are some of lines of research and action. A similar disease in the cotton plants of the Udumalpet area needs further attention. For the present the red colour of the leaves and the stunting of their growth and yield are attributed to the deficiency of magnesium and boron and the application of a mixed solution of these missing elements is suggested. But this disease needs further investigation. The mango fruits are affected by the tiny mango hoppers which affect the flowers and leaves. Here again spraying of identified insecticides during January-March can control the spread of the disease over this and other areas demanding further investigation. The state government's Kathuthotam agricultural farm has developed a fertiplacer machine which meets the farmer's need for applying fertilisers uniformly and judiciously. It can be operated by a single farmer and can be used in paddy planted fields even for closer row spacing of 15 cms. It covers in one day of 8 hours 1-1.25 acres and reduces upto 50 per cent the nitrogenous dose of fertiliser. Finally following the Karnataka Forest Department's work on producing the bio-climate vegetable map of the state, the first in the country, which would show the type of vegetation even within a patch of 50 hectares needs to be developed by this state also.

Dairy Farming: The Dairy Development Corporation in the next 2 years will be introducing sterilised milk with a shelf life of upto six months in unrefrigerated conditions. The bacteria free milk will be produced by the Ultra High Temperature (UHT) process and packed in aseptic plastic containers. Tamil Nadu will have a UHT processing plant in Madras to cater to consumers in Madras, Coimbatore, Salem and Madurai. The Tamil Nadu Dairy Development Corporation is extending the system of supply of milk in polythene bags to Madurai and other districts. In Madras city 1.7 lakh bags a day are in use, representing 30 per cent of the 2.5 lakh litres of the daily milk sold. The Central Herd Registration Scheme under which field registration of the cattle in the breeding tracts of the different types are undertaken with the help of the states who are responsible for milk recording and the stand-

ardisation of norms for different breeds has started with registering 8 indigenous breeds of cows and 2 of buffaloes—which is 5 per cent of the milch animals. It plans to cover 16-20 per cent in order to increase the milking capacity of the breeds by selective breeding and using them for improving milk production and dairy enterprises in the underdeveloped areas of the country using breeders' associations for the purpose.

Tea : During the calendar year 1978, Indian tea production was a record of 571.1 million Kg. (an increase of 10.3 million Kg. over the previous year), due to the Southern production of 130.2 million Kg. and the higher Northern production of 440.9 million Kg. The world crop for 1978 is estimated at 1,000 million Kg. an increase of about 12 million Kg. over 1977, due to Indian increased output plus those of Kenya and Indonesia, while Sri Lanka, Uganda and Bangladesh produced less. Tea exports as noted in the last Issue (see p 148) are lower both in quantum and earning and to stimulate and expand exports, the government enhanced on February 14 the abolition of the export duty on tea of Rs. 3 per Kg and a plan to double the amount of replantation subsidy for the tea industry. The current Tea Board scheme provides for a replanting and replacement planting subsidy of Rs. 4,000 per hectare in the plains and Rs. 5,000 in the hills. Now that the Tea Board has increased its plantation loan scheme from Rs. 11,250 to Rs. 20,000 per hectare in the plains and from Rs. 13,750 to Rs. 25,000 in the hills, there is a case for doubling the subsidy. The Union Commerce Ministry has expressed concern over the present state of tea gardens and is taking over 6 more neglected tea gardens in Darjeeling as they are either sick or about to go sick. There are 4 other gardens in Dooars and Terai which are also under consideration for take over because of their mismanagement.

Coffee : The coffee production for 1977-78 is now placed at 1,23,000 tonnes comprising 58,800 tonnes of Arabica and 64,2000 tonnes of Robusta. The 1978-79 crop is estimated at 1,05,000 tonnes. Upto the end of 1978, the pool received of the 1977-78 season 1,22,879 tonnes of which 40,791 tonnes were sold internally and 63,849 tonnes exported. During the first 9 months April-December 1978-79, 46,740 tonnes of coffee worth Rs. 112 93 crores were exported. In order to increase the export of instant coffee, the Union government is planning imports of sophisticated machinery in order that India's instant coffee may become more competitive internationally. Exports of instant coffee have been somewhat low and erratic, in 1976-77 184 tonnes, in 1977-78 387 tonnes, while in 1975-76 it was 467 tonnes and between April and September 1978 258 tonnes. The capacity of 2,000 tonnes is just enough to meet internal demand and hence the need to expand capacity. At the international level, world coffee price remained volatile, the total production recovering from the low 1975 level though not very much. The wide price fluctuation is keeping production from increasing and may activate the International Coffee Agreement (See vol. VI p 655). In February the International Coffee Organisation's composite price dipped to $ 1.2575 a pound and so may soon trigger the calling of the Executive Board to set and discuss export quotas and the price ranges at which they must operate.

Rubber : Production of natural rubber in the first 11 months of 1978 in the country was down by 17,506 tonnes at 1,14,591 tonnes compared to the same period last year. In 1977-78 during the

period April-January 9,441 tonnes were exported whereas in April-January 1978-79 12,275 tonnes were imported. Internal rubber consumption increased by 8,297 tonnes in this period to 1,27,758 tonnes. Towards the end of January 1979, the rubber price was Rs. 961 per quintal. In the last issue the request of the tyre manufacturers to purchase directly rubber from abroad was referred to (see p 149), that request has been referred to the inter ministerial committee and in the meanwhile the 15,000 tonnes import is to be handled by STC. The bulk of the rubber is being imported from Malaysia. For the development of rubber plantation, during, the VI Plan, the Commerce Ministry has proposed an outlay of Rs. 33.28 crores. For 1979-80 the Planning Commission has approved Rs. 3.80 crores for continuing schemes and Rs. 8.50 crores for new schemes including those to be implemented by research and rubber production departments of the Rubber Board. The Rubber Board has formulated a Rs. 53 crore integrated rubber planting subsidy scheme to increase production of natural rubber in the country. The target for the first stage of 4 years is 40,000 hectares in the small sector, every year 5,000 hectares of new rubber plantation and replanting areas will result in 20,000 hectares of new rubber plantation and replantation of another 20,000 hectares during this 4 year period, resulting in an additional production of 48,000 tonnes. The subsidy in both schemes will be Rs. 7,500 per hectare.

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III Industrial Development

Salem Steel : The Steel ministry has sanctioned Rs. 47 crores for the Salem steel plant for 1979-80. The decision to double the plant's capacity from 32,000 tonnes to 65,000 tonnes has been taken, involving an additional investment of Rs.27 crores. Towards February end two contracts for Rs. 6 crores were signed with a West German firm by the plant for the supply of a shearing line and a slitting line for stainless steel strips. Work is proceeding as scheduled at Salem and commercial production will start in September 1981.

Small Industries : SIDCO has planned to put up 2,000 small industrial sheds for small entrepreneurs in rural areas. In 1978-79, 900 sheds have been erected. For each district, statistics are being put together on raw materials available, infrastructure and marketing, on the basis of which small industries can be started. The establishment of two more industrial estates in Ramanathapuram district, one at Rajapalayam and the other at Aruppukottai, has been proposed by SISI The Institute which has launched the District Industrial Centre at Ramanathapuram has completed a techno economic survey of this area and has prepared an Action Plan of 15 months from January 1979 during which 100 industries can be started at a cost of Rs. 160 lakhs as fixed capital and Rs. 265

lakhs as working capital. To begin with two motivation programmes at Paramakudi and Rajapalayam to be followed by one at Aruppukottai are being conducted to encourage entrepreneurs in East Ramanathapuram to make up for the fact that 85 per cent of the 1,557 small units in the district are concentrated in Srivilliputhur, Sattur and Rajapalayam taluks. SISI is also planning to organise an industrial management course for young engineers at Karaikudi and a specialised training course in production and financial management for the printing industry at Sivakasi. It has suggested a training programme in leather foot wear for prospective entrepreneurs and self employed workers in Paramakudi and Ilayangudi, and using the technically qualified persons coming out of the 3 ITIs, 4 polytechnics and 1 engineering college. It has also recommended the modernisation of the match factory and on the basis of available resources, skill and demand, has identified a number of industries ranging from cashew processing, refining of groundnut oil on to brick and tile making. The State Bank of India reports that Tamil Nadu received the largest share of advances made to small and village industries in 1978, Rs. 4.30 crores out of Rs. 5.93 crores, and Rs. 92.46 crores out of Rs 132.24 crores in the financing of small scale industries. The DICs are functioning in 8 of the 15 districts and have helped 900 new small industries to go into production. But the DICs are plagued by problems — only for half of them have functional managers been appointed; an action plan has to be developed out of model plan submitted for each district by SISI, which has not been done, in some districts the advisory committee has not held its first meeting as yet, no objection certificates are still to be obtained for a number of approved industries, there are power supply limitations as well as marketing and finance problems. TIIC and KVIB should actively assist and be represented on the local DIC committees, if the DICs are to catch on and function effectively.

Coal Shortage and Urban Land Tax (ULT) : The shortage is seriously affecting the cement, paper, sugar, textile, tea and foundry industries. The foundries in Coimbatore are in dire strain because of the nonavailability of coke. The Alangkulam cement factory had to close down for 10 days in December, incurring a production loss of 12,000 tonnes and 13 days in January cutting production by 15,000 tonnes. Half the coal for cement units in the state comes by ship to Tuticorin from the ECL and if a shipment is missed, the lost quantity is never made up, so they work when they get Singareni coal and shut down when Bengal-Bihar coal does not arrive. In January the shipment was missed and February shipment will arrive in March. Railways also live on a hand to mouth basis. The State government has reduced urban land tax by 25 per cent for small industries. The small industries are asking for a complete exemption and in any case for a change in the guidelines for valuation of land used by industries.

Ford-Simpson : The Union government is expected to approve the application of Simpsons for collaboration with Ford Motors in the US, for manufacture of trucks It is now manufacturing Perkins diesel engines on the Ford design and so its request for a capacity of 25,000 vehicles a year will be approved. There is a large and growing demand for transport vehicles which will be 1,00,000 by the end of the Plan period against the present commercial vehicles capacity of 70,000.

Sugar : Along with a number of other major sugarcane producers, Tamil Nadu

which produced 17.16 million tonnes of cane over an area of 1,64,000 hectares in 1977-78 has indicated an operational target of 15.22 million tonnes on an area of 1,50,000 hectares in 1979-80. The cut in production by the states is sizable and will come up for review at the Sugarcane Development Council in Lucknow. The cooperative sugar factory at Ambur has stopped crushing cane since February 1 following the decision of the growers not to supply the factory with cane as a protest against its decision to withhold Rs. 20 per tonne of cane as temporary deposit and also demanding payment of the amount withheld. The factory paid Rs. 95 per tonne of cane against the statutory price of Rs. 115.30. Starting from November 11, the factory has so far crushed 1.4 lakh tonnes of cane and claims that the fall in the price of sugar led to the lower cane price. The management of the Cauvery Sugars was taken over by the government under the take-over Ordinance as it was not able to start crushing operations this year and it is likely that the state custodian will start operations soon. SISMA has proposed to ISMA a revised formula for the monthly release of sugar : the basis for prorating should be the stocks held by factories on a particular date plus the anticipated production for the remainder of the season minus the quantity of buffer stock and quantity to be exported. The balance is to be the base for prorating the monthly allotment. Also the agreement should come into force only if 90 per cent of 1977-78 producers accepted the scheme. These suggestions were taken into consideration in the monthly release scheme approved as referred to earlier.

AIC and ACCI : The Agro Industries Corporation produced and sold 2,000 tonnes of sunflower oil in February and announced to set up a Rs. 56 lakh plant at Poochampalli in Dharmapuri district to manufacture sunflower oil. The corporation also put on sale at the same time Kadola, a solvent which was an extract of double refined oil. Also in February the Alkali and Chemical Corporation of India opened its Rs. 12 crores integrated drug and nomicide plant at Ennore. The manufacture of nomicide is important for the tea and coffee industry and their export programmes as well as for cotton crop.

Mini-Cement : The first mini-cement plant set up by the Cement Research Institute as a pilot project in Tamil Nadu has proved that the establishment of mini cement plants are feasible and economically viable. The mini cement plant is established in Muduathur near Tiruchirapalli with vertical shaft kiln and a capacity of 20 tonnes per day is running successfully. The clinker produced in a vertical shaft can be used to manufacture blended cement like portland slag and portland pozolana cement. When these cements are manufactured in a mini plant, all that is needed is to increase the additional grinding capacity and accessories to enable the unit producing 50 tonnes a day of portland cement clinker to produce 100 tonnes per day of blended cements etc. This also increases its profitability.

T. I. Cycles : T. I. Cycles is planning to diversify its programme to place itself on a sound footing. As a unit of tube investments, it will produce components for major automobile undertakings, using existing facilities. As noted in the last issue, it started operations on October 16, and in November found that the productivity per worker was 1.26 cycles against the norm of 1.25 and in December moved up to 1.33 cycles. As an additional payment of Rs. 6 for every 6.01 increase in productivity has been provided for, the worker gets a higher wage. In 1979 it will produce 4 lakh cycles (against 3.95

in 1977). In 1978 the demand for cycles was 3.5 *million*. T. I. Cycles has also developed a smaller cycle for children, LPG scale cum stand, a mobile pedal power kit for water pump and it is also planning to license small ancillary units to produce the components for these items.

Kothari: Kothari's turnover for the year ending 1979 is likely to reach Rs. 34.92 crores (compared to the previous year's Rs. 31.20 crores) and profit after depreciation and interest to be Rs. 2.65 crores (compared to the previous year's Rs. 1.27 crores). In addition to textiles, plantations, fertilisers and chemicals in which its many companies are engaged in, plans are being finalised for entering the electronics and petro chemicals field. The Company's caustic soda chlorine plant will go into production by the end of February. The Chemical project is functioning well because there is no power cut during 1978-79. Caustic soda production will be 10,000 tonnes, chlorine and hydro chloric acid 8,000 tonnes and allied products 4,000 tonnes all valued at Rs. 306 lakhs.

Leather: Indian leather export increased by 23 per cent during the 9 months April—December 1978-79, with exports totalling Rs. 227.88 crores compared to the 9 months in 1977-78 at Rs. 185.68 crores. Finished leather earnings increased by 93 per cent, finished sheep skin jumping to 122 per cent from Rs. 11.36 crores to Rs. 25.26 crores. Finished sole leather increased even more at 140 per cent. EI categories declined by 21 per cent and wetblues by 32 per cent. The International Leather Fair organised by CLRI at the end of January and beginning of February was once more an occasion to exchange views among scientists and leather workers and for reaffirmation of Union and state government support to the industry.

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IV Education, Science and Culture

Unrest in Educational Institutions: In February 10 centres reported unrest followed by demostrations, strikes and in some cases violence and closure in Ujjain after widespread violent incidents, three educational institutions were closed. In Jammu, the University reopened on February 6 but the students again participated in the wider political agitation leading to police lathi charges and scattering teargas in the University premises resulting in the closure of the University. In Madras a dispute between the students of Pachaiyappa's College and the police erupted into large scale violence by the police and led to closure of the college. In Tirupathi, the students continuing their agitation on the police firing in Madanapalli, attempted mass ticketless travelling, burning of railway property and buses and further violence by the police led to the closure of the University. In Patna and

Muzaffarpur students locked the University office in Patna and gheraoed the Bihar University Vice Chancellor over publication of examination results. In Gorakhpur a dispute between students and a cycle stand contractor erupted into violence, destruction of university property and police action and closure of the University. In Delhi the students of the University College of Medical Sciences staged an indefinite strike and dharna for a single authority to run the University College and the Safdarjung hospital. In Tamil Nadu all the 260 colleges were affected and their work brought to a standstill by teachers agitating for job security and UGC scales actual payment. February is the month prior to examinations and is fertile ground for unrest—unfortunately over the examination system which is not worth their price. At the end of February there was a detailed report in one of the Delhi dailies about the mass copying which has become institutionalised in Meerut University and its affiliated colleges. The report is headed 'open book examination', which is misleading as it has nothing to do with the system of open book examination.

Educational Reform: The state government announced its decision to hold a public examination at the eighth standard, which will be open to any student who has reached the age of 14 and is aimed at helping those who have dropped out from schools and have taken a non-formal course or private study. This is really part of the formal stream and meets one aim of bringing nonformal education students back into the formal stream. The Tamil Nadu branch of the National Savings Organisation has introduced a special savings scheme under which higher secondary school students can subscribe to the recurring deposits scheme so that when they leave school they will have some money to pursue college and university studies. The scheme has been introduced in the sixth and seventh standards and hopes to cover 1 lakh students. The NCERT's national conference on examinations attended by 90 persons dealing with examinations in the states meeting in Nagpur in February recommended: (i) the development of designs for setting balanced question papers indicating weightages to different objectives, areas of content, forms of question and pattern of opposition, (ii) entrusting the setting of question papers to those competent in the subject and are expert in evaluation, (iii) the need to develop question banks for improving the quality of teaching and testing, (iv) the evaluation of both academic and non academic aspects in internal evaluation system, (v) separate indication of internal and external examinations grades, (vi) scientific statistical methods of scaling should replace grant of adhoc grace marks, and (vii) research on examinations to have immediate application for improving education. Similarly UGC has recommended that there should be only 3 public examinations in the entire course of education—at the end of tenth, twelfth and undergraduate stage. At the end of the elementary stage—for 8th class — there may be a school or district examination with a view to maintaining standards. There should be a system of continuous sessional evaluation of the progress of each student, paying particular attention to students who do not show adequate progress or are from the weaker sections of society. UGC reiterates its recommendation against opening new Universities and colleges and in place open nonformal higher education channels and delinking most jobs from degrees to reduce the pressure of unacademic factors like job hunting on the main task of higher education which is the search for and diffusion of knowledge.

Mass Communication: The Union government announced in February the

setting up of 3 more TV centres at Bangalore, Trivandrum and Ahmedabad during the VI plan. In addition, 9 relay transmitters are to be set up at Vijayawada, Jammu, Cuttack, Ajmer, Madurai, Varanasi, Asansol, Murshidabad and Panaji. Five more radio stations are also to be set up at Jamshedpur, Tura, Gangtok, Madurai and Agra. UNESCO called an inter governmental conference of members in Asia and Oceania on communication in February in Kualalampur. The recommendations and conclusions of the conference were: (i) UNESCO was asked to promote international and regional cooperation for a more just and effective international information order for promoting the new International Economic Order, (ii) such an order would correct the lack of free and balanced flow of information and equal access to news sources: life patterns, achievements, aspirations, difficulties and failures in developing countries need to be better understood, (iii) while the industrialised countries stressed the critical role of the press in relation to the government, the developing countries emphasised the partnership role of the two and (iv) the formation of Asian News Network was postponed pending clarification by UNESCO of the relation of the Asian News Agencies formed in 1961 to the new network.

Science : The technologies being developed in the country for rural development include: i) the Central Salt and Marine Chemicals Research Institute, Bhavnagar has distilled saline water with solar radiation for drinking purposes, NPL, New Delhi has produced a solar water pump for agricultural use, Regional Research Laboratory, Jammu has developed solar dryers for drying foodgrains, fruits and vegetables; ii) RRL, Hyderabad has found a process for obtaining carbon from paddy husk, as well as sodium silicate and detergents, RRL Jorhat has developed from paddy husk washing powder and particle boards for partitions; iii) CFTRI, Mysore has obtained oil from rice bran and the Central Drug Research Institute, Lucknow used rice bran for producing vitamin E; iv) RRL, Jorhat has developed a process for obtaining dry bakers yeast from molasses as well as oxalic acid and sugarcane wax from sugar press mud; v) RRL, Jammu has developed a process for production of hardboard for packing boxes from pine needles; vi) NCL, Pune has perfected a process for extracting nicotine sulphate from tobacco waste, caffeine from tea waste and coconut pith as a reducing agent in the manufacture of iron from iron oxide; vii) RRL, Hyderabad has developed a mini plant of 4 tonnes a day for use of oil seeds converting linseed oil into paints and varnishes; viii) CFTRI, Mysore processed groundnut cake to groundnut flour used in making high protein foods; ix) the National Botanical Research Institute, Lucknow has developed Dhaircha into a good score of gum and also as protein rich poultry and cattle feed; x) the Central Institute of Medicine and Aromatic Plants, Lucknow has developed a number of agrotechnologies for the commercial cultivation of important medicinal and aromatic plants; xi) the Central Glass and Ceramic Research Institute, Calcutta has evolved a low cost technology for the manufacture of reinforcement glass fibres from locally available glass rods for production of high silica glasses and regenerated the waste plaster moulds for reuse in industry, and xii) the Structural Engineering Research Centre, Madras has developed precast concrete funicular sheets for use in floors and roofs, the analysis and design of medium and long span bridges in concrete and steel and the use of aterite soil for building blocks, using low cost labour oriented machine of small capacity. The Tamil Nadu Agricultural University announ-

ces that it has developed a process to turn the used parthenium into paper and TI Cycles announces having developed a device to indicate to the housewife when the cooking gas (LPG) in her kitchen is exhausted. As noted earlier the Department of Mining has allocated Rs. 10.65 crores for 33 R & D programmes in nonferrous metals, which will be monitored and reviewed by the Department's plan implementation committee on science and technology. The IIM, Bangalore has elaborated a plan to set up an Animal Energy Development Corporation which will extend financial support to institutions engaged in research on the development of animal energy resources, lay down norms and standards for manufacturers of improved agricultural implements and animal feed and offer improved designs of whole implements for exploitation or of parts. It will take up extension and education activities in village and organise training, retraining and functional literacy programmes for craftsmen involved in the repair, maintenance and manufacture of animal powered and animal based agricultural implements. ICMR has recommended pulsed NMR technique for rapid and nondestructive determination of oil in seeds should be used. The Cement Research Institute reports that utilisation of solid fuel including low grade such as 6 coal varieties and several of limestone and optimising the output of cement plants by balancing their qualities and raw mix as R&D programmes were under way during the year.

Health : The Union government has formulated a draft National Health Policy which has been circulated to state governments. It proposes a slowdown in the pace of investment in hospitals and curative services and a shift in favour of preventive, promotive and public health services, the setting up of a chain of sanitary cum epidemiological stations to take care of environmental health problems, detection and control of epidemics and check of quality of water and food, achieving 100 per cent coverage of the population in innoculation and vaccination and 100 per cent health coverage of all children up to age 15 by 2000 AD. It criticises the trend towards the increased application of modern technology such as auto analysis, linear accelerators etc. and advocates use of appropriate health technology replicable with scientific, technical and managerial resources available within the country. It emphasises a programme to train agents of health care in sufficient numbers and right attitudes and outlook who will function in an orchestrated manner. It proposed a reversal of the present domination of the drug industry over the medical profession and favours community participation and self reliance, liberal use of self medication and favours a review of state legislation on health pointing to a national health insurance scheme. The new Union Health Minister recognises the urgency and priority of the population question and plans to call a meeting of Chief Ministers of Northern States to discuss ways and means of revitalising the family planning programme. While the programme is reported to have picked up in Gujarat, Orissa and the 4 Southern States, Uttar Pradesh, Madhya Pradesh, Bihar, Rajasthan, Punjab and Haryana are yet to recover from the very poor records of the past 18 months. NDC is being requested to allocate one day for a discussion of the population question and a special drive launched in the northern states. A study on the efficacy of BCG in controlling tuberculosis in Chenglepattu district has thrown doubts on its effectiveness. The Union Ministry of health feels however, that the study needed a longer period to study its follow up and so the government was going ahead with its scheme of integrating the

BCG vaccination with the general health services. The Union Ministry reports that the January family planning month helps the programme to pick up. Sterilisation in January 1979 was 1,78,992 compared to 1,25,553 in December 1978. Bihar which reported 4,643 sterilisations in November, 7,524 in December went up to 13,036 in January, Haryana 1,300, 1,557 and 3,468, Jammu and Kashmir 323 and 2,005, Madhya Pradesh 5,510 and 15,678, Rajasthan 1,579 and 3,472, Uttar Pradesh 3,379 and 5,033 Punjab 1,208 and 2,809. Orissa recorded 6,578 in December and 20 426 in January and Tamil Nadu 26,708 and 32,046. The state government announced in February acceptance of the Union's suggestion to earmark 8 per cent of central assistance for achieving accepted performance in family planning measures.

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V Employment

The October 1978 issue of the Reserve Bank of India Bulletin in a study of the country's employment points out that despite the average annual increase of 5.3 per cent in industrial production and 4.1 per cent in GNP during the 4 year period March 1973 to March 1977, the rate of employment in the organised sector declined continuously from 4.1 per cent in 1972-73 to 2.5 per cent in 1976-77, being an average annual growth rate of 2.5 per cent. During this 4 year period the public sector provided additional employment to 18.74 lakh persons, while the private sector employed only 18,000 persons. The better performance of the public sector was due to the rapid branch expansion of nationalised banks and takeover of a number of industrial units by Union and State governments resulting in its share of total employment in the organised sector increasing from 63.6 per cent in 1972-73 to 66.9 per cent in 1976-77 while that of the private sector declined from 36.4 per cent to 33.1 per cent during that period. In 1976-77 employment in the public sector increased at the rate of 3.6 per cent and in the private sector by 0.33 per cent. Maharashtra had the highest share at 14.7 per cent, followed by West Bengal (12.1 per cent). The P. C. Mathew Committee on the National Employment Service submitted its report in February and among its important recommendations are (i) private recruiting agents should not be banned but their activities regulated, (ii) in any state where the bulk of appointments are made to class III and IV employment directly bypassing the Exchanges, the value of continuing the exchanges may be examined by the state government, (iii) the charging of fees by service commissions and recruitment boards from the candidates applying for jobs should be reviewed, (iv) employers should be encouraged to visit the exchanges and select whom they want rather than be compelled to recruit from the exchanges, (v) employers should have full freedom to appoint qualified people according to their job requirements, (vi) the

exchanges should do everything to drop their bureaucratic image and procedures and develop close relations with employers and clients, vii) the exchanges should undertake detailed local surveys on rural employment during seasons of severe unemployment, viii) employment exchanges should not be asked to manage unemployment benefit schemes, ix) self employment schemes for the handicapped and for SC and ST groups should be encouraged, x) the legality and propriety of existing restrictions imposed by state government on registration at employment exchanges in each state should be revived and if residential restrictions are needed they should be imposed by Union legislation. 4 of the 10 members have included a dissenting note which asks for statutory obligation on all job seekers to register with the exchanges, making illegal for any one to employ any person in a skilled or semiskilled job unless he holds a valid registration number. The Tamil Nadu government accepting the recommendations of the Ramachandra Commission revised the wages in East Thanjavur as follows: a) for adults, 7 litres of paddy and Rs. 2.80 cash per day for ploughing, sowing, plucking, seedling, shaping land, field channel, preparing land for sowing and transplanting, transporting manually farmed produce and implements, or Rs. 7.20 per day from June 1 to September 30 and Rs. 6.60 per day from October 1 to May 31. The government also issued orders revising the minimum wages for motor transport workers in the private sector from February 15 on a range of Rs. 130 to Rs, 300 per month. DA is linked to 325 points of city consumer prices and for every rise or fall per point an adjustment of 75 paise will be made on the first April of every year. The Union cabinet decides to permit sale of houses built for industrial workers by cooperative societies and employers under the integrated housing scheme for industrial workers and economically weaker sections of society to the occupants on ownership basis, until February 15, 1979, the food for work programme generated 16 crore mandays of employment for which 5.3 lakh tonnes of foodgrains were distributed. The overall central investment would be Rs. 150 crores and Rs. 50 crores for the states. 16 states are participating in it and Tamil Nadu has asked for its share of grains in rice for its participation. The question of increasing the rice content of the programme from 50 to 75 per cent was being considered. The programme, the government claims, has improved nutritional intake in Uttar Pradesh and Bihar and has enabled the landless labourers to improve their bargain if possible and secure minimum wages. The total employment to be generated in 1978-79 is estimated at 400 million mandays. The Union government also announced in February a scheme to promote youth employment in rural development works and in innovative forms of artistic and cultural expressions to bring about social changes. Voluntary agencies will be assisted in imparting training (for 1 year periods) to non student youth for improving their functional skills for employment and short term (1 week to 1 month) training will be organised for nonstudent youth leaders from the poor and deprived sections of society to help them act as social changers. The government reports a serious loss of 72.71 lakh mandays in the period January-August 1978, resulting in the economic competence and viability of many undertakings being eroded. The Faridabad labour unrest reported in February is typical bitter inter union rivalry, mushrooming trade unions and management's refusal to reinstate victimised workers. These are the general causes throughout the country for this serious labour situation.

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VI Other Items

Director's Section: A striking characteristic of research studies on the Indian economy is their concentration on all-India data. If one reason for the failure to study the economy of India at the level of the States that comprise it is the aggregative bias of many economists, another reason is the paucity of corresponding data at the State level. All-India data is often more comprehensive, regularly published and easily availabe than data for states. There are still important data items which are not available for the States: researchers have complained, for instance, of the lack of even such basic data as patterns of savings and investment at the state level.

While, as has been indicated above, there are important gaps in the available State level data as compared with all-India data, it must equally be stressed that there is an impressive body of official and semiofficial data pertaining to the State level available to a researcher today. This data is still grossly underutilised mainly because many researchers do not know of the existence of much of the data that is available. Others, even if aware of the existence of certain information, are unable to track it.

The Institute has now brought out a *Manual of Data sources in the Tamil Nadu Economy* (as announced in the Bulletin of October 1978) to fill to some extent at least the information gap relating to the Tamil Nadu Economy. The *Manual* is intended to inform students of Tamil Nadu economy what the available sources of data are and where they are located.

The method of compilation of the *Manual* was to send a researcher of the Institute to the Offices of departments of the Government of India and the Government of Tamil Nadu, other official and semiofficial agencies and to some other institutions, such as the University of Madras and the Agro-Economic Research Centre, the Institute for Techno-Economic Studies, the Institute for Financial Management and Research and Chambers of Commerce. The Institute informed each office of the purpose and scope of the *Manual* and requested it to provide a list of the published data available with it to the researcher. The material gathered has been classified under different heads to compile the *Manual*.

The contents of the *Manual* are ordered as follows: In the first part of the *Manual*, the sources of data are arranged thematically into ten broad sections: agriculture, industry, subsidiary occupations, consumer expenditure, internal and international trade, population and demographic studies, public finance and social welfare, employment and unemployment, scheduled castes and scheduled tribes and general economic data. These sections have been further divided into subsections and the data source recorded under these subsections. Finally, against each particular source of data, the office or other reference-place where the data-source is located and its address have been provided. This section has a wide coverage listing close to one thousand entries.

The next part deals with publications which are, in varying degrees of comprehensiveness, reference publications for the Tamil Nadu economy as a whole. Part 2-A deals with the World Agricultural Census, Tamil Nadu, and Part 2-B with *Tamil Nadu — An Economic Appraisal, Statis-*

tical Handbook — Tamil Nadu, the *Annual Statistical Abstract* and *Quarterly Statistical Abstract* and the *District Statistical Abstract* and the District Statistical Handbooks. Rather than entering them against every subsection in the first part, they have been taken separately in the second part, where their contents have been recorded in some detail.

Put briefly, in the first part data-sources are organised thematically, in the second part they are organised with reference to the publication in which they appear. The third part deals with the Census of India 1961, Volume IX (Tamil Nadu) and the Census of India 1971, Series 19 (Tamil Nadu). It was felt that this body of data was so distinct and wide ranging in scope that a separate listing of it would be helpful. The contents of each of the publications of the two censuses have been produced in necessary detail.

The *Manual* is the first publication of its kind. It is, for all its limitations, a detailed and informative guide to any student of the economy of Tamil Nadu. It is hoped that those who are interested in the study of the Tamil Nadu economy will find it a useful guide and that its utility to researchers and to offices and institutions will serve as an incentive to them to provide information not covered by the present edition. It is such cooperation by those who find the *Manual* of use to their work that will ensure that successive editions of the *Manual* are more comprehensive.

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Dr. T. N. Madan, Member Secretary of the Indian Council of Social Science Research visited the Institute on March 8. This was Dr. Madan's first visit to the Institute after he assumed office last year. Apart from holding discussions on organisational and administrative matters with the Director, Dr. Madan, himself an outstanding scholar and researcher in social anthropology, also had a lively session with members of the Institute on problems relating to research.

AUT : The Association of University Teachers organised a seminar in early February in the WUS centre to consider the Hospitals and Educational Institutions Bill which has been drafted by the government to help those two groups of institutions who have been brought under the Industrial Relation Act by a Supreme Court judgement in February 1978. The Bill exempts the two institutions and all research institutions from the Act and provides within each hospital and educational institution machinery — rather elaborate ones—for dealing with employee grievances. The provisions were explained as representing a step forward in ensuring job security, though it was a long way from the country's guru-shishya tradition. There were sections who wanted to reject the Bill and keep the institution under the Industrial Relation Bill.

Tata McGraw Hill and Asian Productivity Council: The Board of Governors of the Tata McGraw Hill Publishing company met at Bombay in early February and reviewed and approved a five year plan for the company to expand its publication programme in a large way. Its export effort was commenced and the expansion of the search for indigenous experts to write books was emphasised. A meeting of the Asian Productivity Council was held in mid February at Productivity House, New Delhi, attended by six Asian countries and a number of experts to draw up a plan for an inter country Asian study on productivity. It was realised that for the present the study would have to be confined to manufacturers leaving out the large agricultural area, and within such parameters guidelines were agreed upon to measure productivity within each country by individual

industrial units, groups of industries and for the country globally and on this basis attempt at a later stage inter-country comparison possibly first comparing comparable countries like Singapore and Hongkong, Taiwan and South Korea and taking India as a case by itself.

TNBCE AND SRC : A meeting of the executive committee of the Tamil Nadu Board of Continuing Education was held in mid February at the MIDS seminar hall when the proceedings of the National Board of Adult Education as they related to Tamil Nadu were reviewed. The major issue discussed at the meeting was the crisis facing the Santhome NFE for school dropouts project—where because 2 years have passed without government declaring the second year results and awarding diplomas and reestablishing equivalences, interest in the project in flagging. It was decided to make a final appeal to the government, Union and state to save this unique project—unique both for the country and for the third world. A meeting of the Governing Board of the State Resource Centre also on the same day reviewed the centre's programme accomplishment and discussed the budget in light of the Union government's comments and reaffirmed its decision on the budget.

India International Centre : There was a meeting of the Board of Trustees of the India International Centre at the end of February in Hyderabad with the President present. Besides reviewing the functioning of the centre, it was decided to appeal to all members to contribute for this year, which is the 20th year, double the annual subscription to help the Centre out of a difficult tax demand situation it is facing. It was also decided to increase all subscriptions from all categories of members this year.

Zakir Husain Lecture and IIT Seminar : The last in the series of the Zakir Husain Science and Cultural Federation lecture for 1978-79 on Social Justice was delivered at the end of February. In this last lecture the economic facets were dealt with. The problem of social justice was defined in terms of equitable income and assets ownership distribution. It was pointed out that the usual economic concepts and marketing rods of social justice were not production of useful information on this subject, that the attainment of the social justice goals seemed to require socialisation of the means of production, short of which certain economic dykes can be erected to prevent social injustice worsening. Also at the end of February there was a seminar in IIT, Madras, of some 200 engineers scattered all over the country who had benefited from a period of study in West Germany. The Seminar dealt with some of the tasks facing engineers in the country and discussed at length problems of energy and post harvest technology.

MCt. Chidambaram Chettiar Lecture and Sahitya Akademi : Under the auspices of MCt. Chidambaram Chettiar endownment chair, the Speaker of the Lok Sabha, Mr. K. S. Hegde delivered in the Madras University two lectures on the role of Parliament at the end of February. He emphasised the growing complexity of the work devolving on Parliament and the need for it to function increasingly through committees. Also the need to change the electoral system to make Parliament more representative were also brought out. The Sahitya Akademi and the University of Madras joined together and ran a rather special seminar on mathematical and computer analysis of Indian Music. This is a new area in which a number of specialists in the hard science—physics, chemistry, mathematics and statistics are doing sound and pioneering work applying their methods

to Indian musicology. It was suggested that this would result in further development of theory and also help to promote dialogue between Western and Indian music tradition.

Parliament : In February there was a meeting of the Consultative Committee of Parliament which devoted its entire 2 day session to the discussion of the draft national policy on education presented to it. There was also a meeting of the joint Select Committee on the Viswabarathi Amendment Bill when the evidence from 3 witnesses were received. Both Houses were convened on February 19, when the President addressed the two Houses together and the rest of the month in both Houses was taken up with discusssing the President's address.

March Development Seminar : The paper for the March Development Seminar, 'Regional Patterns of Development in Tamil Nadu' by V. Chandrasekara Naidu, Madras Institute of Development Studies, together with a summary of proceedings of the seminar appears as the first article.

Second Article : A report on the first session of the Long Term Study Project on the Indian Economy held at the Institute during March appears as the second article.

Regional Patterns of Development in Tamil Nadu

By

V. CHANDRASEKARA NAIDU

After 25 years of planning in India, it is now generally recognised that all our efforts at reducing poverty and inequalities have gone contrary to their purposes and have benefited a small section of the population in the country. A larger chunk of our population have yet to benefit from the developmental activities of the state. Hardly any measure worth the name has been undertaken to solve the problems of poverty and unemployment. It is very late that our Indian planners and policy makers have come to realise that over the years adequate attention has not been given to rural development. Consequent to this government has now come out with the Rolling Plan which is intended to remedy some of the defects of all the past five year plans. Our budgets both at the centre and in the states have injected rural bias into them.

To achieve speedy rural development governments are now embarking on a policy of formulating block level planning and development, particularly in the backward regions. These regions were selected based on their past performance with respect to agriculture and so on. At this stage it becomes necessary to understand how some of the developed regions in the state had gone about achieving the goal of eradication of poverty in those regions in relation to those regions which are not equally developed. Subsequently, in this paper I have made an attempt to analyse the regional patterns of development in Tamil Nadu, which would help both policy makers and theoreticians who are all concerned with the genuine development of the state and the country.

Data Sources : The data used in this paper mainly come from a) Tamil Nadu : An Economic Appraisal, b) Season and Crop Reports and c) the unpublished works of Dr. C. T. Kurien, *Economic Change in Tamil Nadu 1960-1970 and Dynamics of Rural Transformation in Tamil Nadu.* The detailed tables from which the main inferences were drawn in the text are available with the author.

In Tamil Nadu there are 15 districts in which Madras and Nilgiris districts have certain peculiar features which will not permit us always to compare all the other 13 districts with these two districts with regard to certain features.

Among the districts of Tamil Nadu, Coimbatore is found to be the biggest both

in terms of area (15,673 sq km) and population (43,73,178) and Kanyakumari is found to be the smallest in the state.

During 1951-61, the decennial rate of growth of population was highest in Nilgiris (31.30%) followed by Madras (22.11%). During the period from 1961 to 1971, this phenomenon has changed with Madras showing the highest rate of growth of population (42.81%) followed by Chingleput (32.38%). In both these periods Kanyakumari and Dharmapuri had occupied third and fourth place in the state. The density of population being 726 per sq km is highest in Kanyakumari. This is more than double that of the state's average of 317 per sq km. All other districts are closer to that of the state's average in this respect.

In 1961, the percentage of population living in urban areas to the district's total population was highest (31.63) in Madurai, closely followed by Tirunelveli (31.05) and Coimbatore (29.01). In 1971, this phenomenon has also changed with Coimbatore having the highest percentage (35.59) of its total population living in urban areas, followed by Chingleput (34.76) and Tirunelveli (32.17). The rate of growth of population living in urban areas was high in Chingleput district (from 20.71% in 1961 to 34.75% in 1971). This may be due to the effect of Madras city and its rapid industrialisation.

Among the districts Kanyakumari has the highest percentage (58.21) of literates to its total population (excluding Madras which has 62% of its population literate). Throughout the period from 1951 to 1971, Kanyakumari has maintained its lead in literacy over all other districts (excluding Madras) in the state. In 1971, Dharmapuri has the lowest percentage (23.32) of literates to its total population.

In 1971, scheduled castes and scheduled tribes population in the state account for 17.76% and 0.76% respectively of the state's total population. The percentage of scheduled castes population to the district's total population is highest (26.28) in Chingleput, followed by South Arcot (25.92) and Thanjavur (22.76). Thus, Chingleput and South Arcot came to have more than one-fourth of their total population each belonging to scheduled castes. Kanyakumari has the lowest percentage of scheduled castes population (3.89) to its total population in the district. Scheduled tribes are mostly concentrated in the districts of Nilgiris (4.02%), Salem (3.15%) and North Arcot (1.88%) of their total population each. All other districts are having less than 1% of their total population each belonging to scheduled tribes.

Land Utilisation :

Of the total geographical area of about 130 lakh hectares in the state only 46% was the net sown area in 1975-76. Net sown area as a percentage of the total area had not increased for the last 25 years, having been 46% in 1951 as well. Only in 1970-71 it increased to 48% and then came down in 1975-76 to the old position of 46%. At the state level it is clear that increased agricultural production was mainly brought out by the increased productivity of land. And there is much scope for extensive cultivation.

Among the districts in the state Thanjavur has the highest percentage of net sown area to its total area (67.20). In all other districts (except Tirunelveli and Nilgiris) the percentage of net sown area to total area each come closer to the state's average of 46.1%. Tirunelveli has only one-third of its total area as net sown area and Nilgiris has only 23% of its total area as net sown area.

The percentage of area sown more than once is also highest in Thanjavur (39.7). Ramanathapuram (excluding Nilgiris) has the lowest or negligible percentage of its total area sown more than once. Chingleput, South Arcot and Kanyakumari have a fairly considerable percentage of area (18.0, 16.7 and 14.1 respectively) to their total areas sown more than once. All other districts have around 10% of their total area sown more than once. The districts other than Thanjavur, Kanyakumari. Chingleput and South Arcot have lower percentage of areas sown more than once each and hence there is need for increasing the area sown more than once by extending irrigation facilities in these districts.

The percentage of barren and unculturable land is highest in South Arcot (11.5). This excludes Nilgiris which is a hill district in the state. The percentage of culturable waste is highest in Nilgiris (6.5) closely followed by Chingleput which has 5.8% of its total area as culturable waste. However, the percentages of culturable waste and barren land in the state are not more than 3% and 5% of the total area.

With regard to the area covered by forests in the districts (excluding Nilgiris) Dharmapuri and Kanyakumari have about one-third, North Arcot and Coimbatore have about one-fourth, and Salem and Madurai have about one-fifth, respectively of their total areas covered by forests.

Among the districts Thanjavur and Chingleput are highly irrigated with 86% and 72% respectively of their net sown area irrigated in the year 1975-76. Dharmapuri, Tiruchirapalli and Salem are very poorly irrigated districts with 15.5%, 28.8% and 25.9% respectively of their zone area each. South Arcot, North Arcot and Pudukkottai each have around half of their net sown area irrigated. So Dharmapuri, Salem and Tiruchirapalli merit attention with regard to the provision of increased irrigation facilities immediately.

Cropping Pattern :

Land utilisation pattern in the districts noted above reflects itself on the cropping pattern especially in relation to the proportion of net sown area irrigated in them. Paddy is predominantly cultivated in Thanjavur, Chingleput, Pudukkottai and Kanyakumari. Even though the percentage of area irrigated to total area sown is high in Coimbatore (41.6), it is largely cultivating commercial and cash crops in the district. The percentage of net sown area cultivated with paddy is very low (15.4) The highest percentage of net sown area in this district is cultivated with cholam (26.4). This is followed by groundnuts, pulses and cotton in that district. Dharmapuri, Salem and Tiruchirapalli which are poorly irrigated are largely cultivating with ragi, cholam, cumbu and groundnuts which require less water. Thus, to a larger extent with the exception of Coimbatore, paddy is cultivated largely only in those districts which are highly irrigated with the poorly irrigated districts cultivating largely the dry and commercial crops.

Paddy Production and Productivity :

Paddy being the major crop grown in the state it is worth examining its production and productivity in the districts. The total paddy production in the state in 1975-76 was 58,67,000 tonnes. One-fourth of this total production came from Thanjavur alone. Three other districts in the state which accounted for sizable shares in the total production are South Arcot (14.73), Chingleput (12.27) and North Arcot (10).

These three districts along with Thanjavur had accounted for more than 60% of the state's total production in the year 1975-76. The remaining 10 districts had accounted for less than 40% of the total paddy production.

Paddy productivity for the state as a whole was 2,182 Kg/ha in 1975-76. Among the districts paddy productivity per hectare was highest in South Arcot (2,700 Kg) followed by Coimbatore (2,607 Kg), Kanyakumari (2,458 Kg.) and Salem (2,468 Kg). Paddy productivity is lowest in Ramanathapuram with only 1,192 Kg/ha. The districts which account for lower productivity (less than state's average) are Ramanathapuram, Dharmapuri, Pudukkottai and Nilgiris. It is worth noting a fact that Chingleput and Thanjavur, which grow about 70% of their net sown area each with paddy accouting for lower productivity in comparison with the districts like Salem and Coimbatore which grow less than 16% of their net sown area each with paddy. Thus there is need for increasing area under paddy in the regions where productivity is higher, along with the need for increasing productivity in the regions where paddy is grown in larger areas.

Mechanisation of Agriculture in the Districts :

Among the states of India, Tamil Nadu is recognised as highly mechanised coming next only to Punjab. In the year 1973-74, Tamil Nadu accounted for about 28% of the total electric pumpsets used in the country. Among the districts of the state Coimbatore has the highest percentages of total oil engines (20.34), total electric pumpsets (17.81) and total sprayers and dusters in the state (35.94). South Arcot accounts for the highest percentage of the state's total tractors (16.82) closely followed by Chingleput (15.11) and Thanjavur (14.70). Sugarcane crushers are mostly used in North Arcot district which alone accounts for about 39% of the total sugarcane crushers used in the state; of the total 1,084 threshers that were in use by 1974, more than half of these were used in Chingleput, North Arcot and Coimbatore districts. Coimbatore, North Arcot and South Arcot put together account for more than 53% of the total oil engines used in the state. Again Coimbatore, North Arcot and Salem put together account for about 48% of the total electric pumpsets used in the state. Thanjavur, Chingleput and South Arcot put together account for about 47% of the total tractors used in the state. All other districts in the state account for the remaining 50% of the total mechanical implements used in the state in the year 1973-74. Thus, the rapid mechanisation that is witnessed at the state level is mainly brought out by a few districts such as Coimbatore, North Arcot, South Arcot and Thanjavur and to some extent by Salem and Madurai.

Work Force:

At the state level between' the period from 1960-61 to 1970-71, no major shifts were noticed in the percentage of workers engaged in different sectors viz, primary, secondary and tertiary. However, it is worth noting the fact that during a period of rapid agricultural development, there was an increase in the percentage of workers engaged in the primary sector. Even though it is marginal it becomes significant in view of the expectation that the rapid development of agriculture will encourage the movement of workers from primary to other sectors.

At the regional level it is interesting to note that Kanyakumari which accounted for the lowest percentage of workers

(37.26) engaged in primary sector In 1961 had attracted the largest number of workers from secondary and tertiary sectors by the year 1971. No other district in the state has witnessed such a phenomenon over the years. The districts which showed reduction in the percentage of workers depending on the primary sector and over the years are, Chingleput, Ramanathapuram and Tiruchirapalli. However, these decreases are only marginal. All other districts in the state showed increases in the percentages of workers depending on the primary sector. And this has come about mainly by shifting the workers engaged in the tertiary sector to the primary sector, a phenomenon which was witnessed at the state level.

If we examine the number of workers engaged per 1,000 in the years 1961 and 1971, at the state level, it is revealing that there is a marginal increase in the number of workers engaged in agricultural occupations followed by a corresponding decrease in the number of workers engaged in non-agricultural occupations over the years.

Among the districts, Kanyakumari has registered the largest number of workers moving from non-agricultural occupations to agricultural occupations over the years. The districts which noticed the movement of workers from agricultural to non-agricultural occupations are: Chingleput, Ramanathapuram, Tiruchirapalli and Nilgiris. Nilgiris has registered the largest number of workers moved from agricultural to non-agricultural occupations. Among the districts which witnessed the movement of workers from non-agricultural to agricultural occupations is the district of Coimbatore which is highly mechanised and agriculturally well developed, and Thanjavur and Kanyakumari which are highly developed with respect to agriculture. So this proves contrary to the normal empirical expectation that with the development of agriculture over the years, there will be a movement of workers from non-agricultural to agricultural occupations.

Banking and Credit :

On this aspect, we have the district-wise data available on the loans and advances made by scheduled commercial banks and Central Cooperative banks respectively for the years 1975 and 1977. A study of the spatial concentration of scheduled commercial bank activity in the state reveals the concentration of banking operations in Madras and Coimbatore districts. These two districts together accounted for 28.7 per cent of bank offices, 57 per cent of deposits and 68% of the advances as on December 1975. If the relevant parameters of population per bank office and per capita deposits and advances are taken into account the districts of Dharmapuri, Pudukkottai, South Arcot and North Arcot are placed below the state average and the promotion of banking activity in these regions merits attention.

If we take the occupation-wise grouping of outstanding credit of commercial banks in the districts, it shows again a very high concentration of credit given for agriculture and allied activities, industry and trade only in the districts of Madras and Coimbatore.

The amount of credit advanced for agriculture, industry and trade are very small in the districts of Pudukkottai, Ramanathapuram, Dharmapuri, Kanyakumari and Thanjavur.

Even the credit advanced by Central Cooperative banks for agricultural purposes are highly concentrated in the districts of Thanjavur (including Kumbakonam) and Madurai. The districts of

Kanyakumari, Dharmapuri and Pudukkottai have received very small amounts in comparison to other districts from this source.

With regard to savings in the districts, (see, *Tamil Nadu: An Economic Appraisal,* 1977 p. 57), it is revealed that Madras alone accounted for as much as 72.4% of the collections in the state. The other important districts such as Thanjavur and Coimbatore accounted for 6.3% and 4.3% respectively of the state's total savings. Tirunelveli and South Arcot districts *recorded dissavings amounting* to Rs. 62.23 crores and Rs. 5.81 crores respectively in the year 1974-75.

Rural Roads :

Among the districts both in 1961 and 1971, Coimbatore has the longest rural roads constructed in the state. In both the years it is followed by Tiruchirapalli. In terms of availability of rural roads in k.m. per thousand population, it is longest in Madurai closely followed by Coimbatore and Nilgiris. If we take the availability of rural roads in k.m. per village, which is more important, it is longest in Kanyakumari followed by Nilgiris. Of all the districts of Tamil Nadu, only Ramanathapuram has very poor road facilities with only 1 k.m. per village which is lower than state average of 1.3 k.m. per village.

INDUSTRIES :

Large Scale Units :

In 1960, most of the large scale industries were concentrated in the two districts of Madras and Coimbatore in the State. These two districts accounted for about 50% of the total number of factories, 40% of the total productive capital, 50% of the total persons employed and 55% of the total value added in the state. In all these respects Coimbatore had a lead over Madras. Even in 1960, Chingleput came to account for more than 17% of the state's total productive capital which was higher than Madras (16%).

In 1970, this phenomenon has changed with the relegation of Coimbatore to the the third position with Madras and Chingleput occupying the first and second ranks in the industrial map of Tamil Nadu. In 1970 these three districts put together accounted for about 53% of the total number of factories, 70% of total productive capital, 64% of total persons employed, 69% of the total value added by the large scale industries in the state.

Small Scale Industries :

The *spatial distribution of small scale* units in the state reveals that they are geographically well spread out with only a quarter of them concentrated around Madras and Coimbatore. But this dispersion of units in the districts loses much of its meaning as investment, production and employment seem to be concentrated in two or three districts. Of the total investment of Rs. 176.4 crores on small scale industry in the state, 64.6% is accounted for by Chingleput, Madras and Coimbatore in that order. These three districts also account for about 55.5% of total production and 43. 6% of total employment. The per unit asset is high in Chingleput district with 436.3 thousands. A comparative study of the districts shows that production in the small units in Salem, Tirunelveli, Triuchirapalli, South Arcot, Kanyakumari, Thanjavur, Dharmapuri and the Nilgiris falls below the state's average level of production. And hence efforts should be concentrated in these districts to raise the level of production of small scale industries by stepped up investments and employment.

Thus, both large scale and small scale industries are heavily concentrated in three districts of Tamil Nadu viz, Chingleput, Madras and Coimbatore. With their heavy concentration in these three districts, that too around Madras and Coimbatore, have practically neglected all other districts from the process of becoming industrialised regions in the state. Only Chingleput and Coimbatore are well developed with respect to both agriculture and industry in the state. The agriculturally well developed districts like Thanjavur, Kanyakumari, North Arcot are witnessing very low industrial activity.

An Analysis of Poverty in the Districts of Tamil Nadu :

To evaluate the impact of different developmental processes on different sections of population in society, it becomes necessary to examine the nature and dimensions of poverty in the districts of Tamil Nadu.

By applying the 'minimum levels of living' norm (Rs. 21 per month at 1960-61 prices) to the N. S. S. data, a study on "Rural Poverty in Tamil Nadu" by Dr. C. T. Kurien estimated that about 74% of the rural population in Tamil Nadu were living below the poverty line in the year 1969-70. Further the level of poverty has been found to be increasing from 66.49% in 1961-62 to 73.98% in 1969-70. This is significant in that the magnitude of poverty in Tamil Nadu is on the increase despite the fact that this a period of rapid agricultural and industrial development.

This phenomenon noticed at the state level should be studied more thoroughly by examining the magnitude of poverty in its districts. Mr. M. Ramamoorthy in his work on "Poverty and wage goods in Tamil Nadu" (M. I. D. S. Publication) has applied the same methodology that was used to estimate poverty at the state and national levels, to the 1971 census data to measure poverty in the districts of Tamil Nadu. He has estimated the district wise distribution of the poor in terms of worker equivalents. Even though his analysis is somewhat less tenable because of certain assumptions used in the measurement of poverty, it certainly gives an idea of the magnitude of poverty at the regional and lower levels.

Further, it is found that the percentages of the poor to total workers are very high in the districts of Kanyakumari, Tirunelveli, Thanjavur, Chingleput, North Arcot and South Arcot, where it ranges betweet 76% and 86%. The percentages of poor to total workers are low in the districts of Salem, Dharmapuri, Tiruchirapalli and Nilgiris, Coimbatore, Madurai and Ramanathapuram have about 70% of their rural workers living below the poverty line.

The study also reveals that in North Arcot, South Arcot, Dharmapuri, Salem, Thanjavur, Ramanathapuram, Tiruchirapalli and Madurai, the incidence of poverty is high in the agricultural sector. The percentage of agricultural labourers living below the poverty line is the highest in Thanjavur, which contributes one-fourth of the state's total paddy production. The percentage of "other workers" living below the poverty line is highest in Coimbatore which is one of the State's highly industrialised districts.

Thus, the magnitude of poverty is very high in relatively well developed districts and low in relatively less developed districts in the state. In view of this phenomenon witnessed in the regions of the state, it is possible to conclude both from macro and micro level analysis of poverty that there exists direct and positive relationship between development and

poverty. As pointed out in the beginning of this paper that many developmental programmes of the state have gone contrary to their purposes and have benefited a small section of the population is proved beyond doubt from the above district-wise analysis of patterns of development in Tamil Nadu, where each well developed region is having more than 75% of its population living below the poverty line. All the developmental programmes that were implemented in each of these districts must have only benefited less than 20% of their total population.

From the above analysis it can be concluded that we cannot continue those policies and measures which were implemented in the past to effect development in the regions. The repetition of these methods in the backward regions can only succeed in increasing production and productivity which were used to measure the economic development of a region, but not in decreasing the magnitude of poverty. Hence, there is need for an entirely new set of policies which could really solve the problem of poverty and lead to the development of the regions as well.

Summary of Proceedings

The paper "Regional Patterns of Development in Tamil Nadu" was presented by Mr. V. Chandrasekara Naidu at the seminar held on March 29, 1979 at the MIDS. The seminar was chaired by Mr. A. Sethunarayanan.

At the outset, a brief outline of the paper was presented by the author. He stated that the paper was a preliminary attempt at obtaining a broad understanding of the nature of regional development in the State. The highlights of the paper were as follows : A study of regional patterns of development was of utmost relevance in view of the present government's emphasis on rural development. Since data at more disaggregated levels was not consistently available, the district was chosen as the unit of study. District-wise comparisons were made in terms of several indicators like population, land, area, cropping pattern, banking and credit, employment and industrial development. The impact of these variables were then analysed in terms of poverty in the districts. It was observed that major contributions to development in the State came from Coimbatore, Madras, Chingleput and Thanjavur districts. Salem, Dharmapuri and Tiruchirapalli were found to be lagging in agriculture and industry and needing attention in these areas. Besides, a distinction could be drawn between districts which were highly developed with respect to agriculture and districts which were highly developed with respect to both agriculture and industry.

The analysis led to the important conclusion that relatively well developed districts had a high incidence of poverty and vice versa, thereby establishing a positive relationship between development and poverty. For instance, in Thanjavur, a district leading in agriculture, the incidence of poverty was very high among agricultural workers, and in Coimbatore, a highly industrialised district, the incidence of poverty was high among "other workers". Such phenomena indicated that the benefits of development had reached but a few regions. Hence the author laid much stress on the necessity for restructuring policies to eradicate poverty and bring about balanced regional development.

A great deal of the discussion following the presentation of the paper revolved round the issue of the appropriateness of selecting the revenue district as the unit of study. It was felt that district-wise studies which yielded a wider perspective were too aggregative, did not clearly reflect patterns of regional development and completely overlooked the spatial aspect of development. Several approaches of disaggregation were necessary to understand the pattern and process of development. It was therefore thought that moving down from the revenue districts to the taluks would be more meaningful. Two examples of a successful attempt at studying development at the taluk level in Tamil Nadu were cited. In the first instance, the relationship between water supply and cropping patterns was

examined. It was observed that in taluks where water supply had increased, a shift from cereal cultivation to paddy cultivation had occurred. The second example related to urbanisation in Tamil Nadu. In this case, while a district-wise study showed that a relatively large number of districts were urbanised (4 districts out of 15 districts in the State), a taluk-wise analysis revealed a very limited urbanisation pattern (the urbanisation phenomenon being present to an appreciable extent in only 8 taluks out of 103 taluks in the State). Further even at a broader level such as at the meso region it was possible to approach the problem from a different angle such as by grouping the districts into wet and dry districts. This brought out several striking characteristics in terms of variables like cropping patterns, distribution and density of population etc. A very interesting result that emerged was the high density of population in wet districts and vice versa. It was pointed out that different levels of disaggregation would imply, to some extent, the overlapping of areas/regions/districts.

Another suggestion was to tackle the issue from a zonal point of view. Rather than analysing regional patterns of development in terms of a set of indicators, perhaps a socio-economic zone could be identifed and the factors relevant to that zone examined. It was felt that an enquiry into the analysis of regional patterns should begin with the assumption that variations do exist. The district of Kanyakumari, for instance, displayed unusual characteristics such as a high agricultural wage rate and relatively poor labour productivity and considerable geographical mobility of labour. Further a district like Thanjavur, where paddy was the principal crop, could hardly be compared to say, Coimbatore which was highly industrialised and where only since recent years paddy cultivation had become possible and was carried on more on a commercial basis. Also, it was possible to distinguish several regions within one revenue district itself. Hence it was felt that the application of a common set of indicators was both difficult and impractical.

There was some disagreement on the author's conclusion in his paper that "...there is need for increasing area under paddy in the regions where productivity is higher, along with the need for increasing productivity in the regions where paddy is grown in larger areas" since the commonly used definition of paddy productivity (total paddy production divided by total area under paddy) was felt to be inadequate in that it did not take into account the seasonal nature of the crop. It was felt that for practical reasons it was not possible to increase the area under paddy. The more important factors to be considered were the yield per acre and cost. One view was that the emphasis should lie more on increasing production rather than increasing area under cultivation or productivity. Further it was expressed that undue importance had been attached to increasing paddy cultivation as against cultivation of other crops. It was observed that the above argument may not be justified since any rational farmer would have made a cost-benefit analysis prior to his decision to produce either paddy or other crops and selected the crop most profitable for him.

Coimbatore was cited as an example of a highly developed district with a large section of the non-agricultural population living below the poverty line. It was speculated that this phenomenon might be related to the existence of a large section of the decentralised cotton textile sector (a sector characterised by stagnation) in the district. It was felt that greater

attention should be paid to an examination of the causes for the more developed districts experiencing a higher incidence of poverty. Another suggestion pertained to indicating more clearly the district by district correlation between different indices for a better understanding of regional development patterns.

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Long Term Study Project on the Indian Economy - A Report*

The Institute has recently begun a Long Term Study Project on the Indian economy. This Project, which is expected to run over the next five years or so, aims towards making an objective study of the Indian economy so as to understand its structure and working. This would mean approaching the development of the economy as an historically ongoing process, set in historical time. The economy itself must be seen as being multistructured, and an important part of the Project is to search for the linkages between each of the structures and the movement generated by the forces underlying the relationships. An approach of this kind is particularly needed today, when there is a wide-spread feeling among economists that most analyses of the Indian economy today seem by and large to be based upon a framework more relevant, if at all, to the advanced capitalist nations. Such a framework is hardly adequate to understand the development problems of the Indian economy, and one of the purposes of the Project is to develop a frame of analyses for understanding the structure and framework of the Indian economy. It is hoped that the Project will serve the purpose of bringing together a set of cohesive ideas for use in the study of the economy.

The first session of the Long Term Study Project was held at the Institute from March 21 to 23, 1979. This session restricted itself to a study of Indian Industry. Papers presented at this session covered a wide range of issues pertaining to the broad character of the development process in Indian industry. Three central issues arose from the discussions during the session. These were, first, the problems of growth of specific industries; second, questions relating to the transfer and generation of technologies suited to the specific historical and social conditions of the country, and third, the question of linkages between small, medium and large industry.

The two specific industries on which discussions centred were cotton textiles and fertilisers. The textile industry was noted to be characterised by two tendencies: first, the tendency towards 'crisis', reflected in the stagnation in total output and fall in per capita demand, in the low level of profitability relative to other industries, and in the use of obsolete technology and outdated machinery; second, the tendency for the emergence of a 'dualistic structure', i. e, of wide differentials in technical and financial performance between mills such that while a large number were on the verge of 'sickness' and indeed, were often forced to turn 'sick' and go out of production, there were a few which did extremely well both in terms of the level

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* A brief report of the proceedings of the first session of the Study Project held from March 21-23, 1979 at the Institute.

of profits and the extent of modernisation. These two tendencies were explained in terms of a 'structural break' in the market, with a few well-to-do firms constituting an oligopolistic group in the market for luxury textiles while the bulk of firms competed with one another and with the decentralised sector in the market for relatively cheap textiles. This, given the constraint on technical change set by a stagnant market, results in the emergence of the dualistic structure. This tendency appears to be characteristic, not merely of the cotton textile industry alone, but to some extent, of Indian industry as a whole.

The fertiliser industry has been marked by its poor performance in terms of both production and consumption, relative to Plan targets. Such indicators of performance apart, evidence suggests that from the point of view of costs of production and self-reliance, coal should have been the major feedstock for the manufacture of nitrogenous fertilisers, while the nitric acid route to phosphatic fertilisers should have been preferred over the sulphuric acid route. Policies pursued so far do not seem to have paid sufficient attention to the feedstock question. Further, available literature on fertiliser planning in India is almost completely silent on the question of scale, although experience elsewhere, as in China, suggests that under certain conditions small plants can encourage utilisation of local resources, develop indigenous technological capability and provide additional employment. The failure to focus on these issues has had implications for domestic technological capability in fertilisers, reflected in the fact that indigenous knowledge and expertise (with coal-based technology, for example) have remained very meagre. Besides, evidence indicates that the industry in general, and units manufacturing nitrogenous fertilisers in particular, have gone in for a multiplicity of collaboration agreements both in the past as well as in the case of new plants under construction. Thus, despite the increasing share of the public sector in the industry, there has been no systematic social control over the industry either in relation to feedstock and technological choices or in relation to foreign collaboration.

This problem raises the larger question of technology transfer and R & D in India. India is today considered a 'middle level' industrialised country, and is also referred to as an exporter of technology; but it must be realised that indigenous technological capability is developed to a significant extent only in certain areas whereas in others Indian capital has really entered the international market as a junior partner to the multinationals, who hold the expertise. This situation arises because unlike in the case of Japan, for instance, sufficient attention has not been paid to the development of indigenous technological capability along with the import of capital. It was stressed, during the discussion, that the 4:1 rule of thumb followed in Japan, whereby for every dollar of imported technology four were invested in indigenous R & D, is almost the only route to technological self-reliance. However, this requires a degree of manouevrability that the state in India does not seem to have. Continued import of technology thus serves only to heighten Indian dependence on foreign technology.

Attention was also given, during the course of discussions, to the linkages between industrial development and infrastructure. In this context, the issue of educational structure and its relation to industrial development was discussed, mainly with reference to the various methods of assessing manpower indices

and gearing educational policy toward industrial needs.

The final but not the least important issue that came up for discussion was the question of the relation between small, medium and large industry in India. Though the issue figured on all the three days, it was focussed upon sharply in the special session when the participants had the opportunity to meet and discuss with a wide range of people varying from decision makers in industry, both small and big, to bankers, research scholars and teachers. Among the most important points discussed was the problem of definition of small industry. To go by criteria of scale—whether in terms of value of output or value of assets—it was strongly felt, was inappropriate. Such absolute criteria suffered from the problem of distortions when it came to policy formulation. One interesting suggestion made was to follow the Chinese example and use the expression "small" with relation to the types of technology available in the production of particular commodities. It was felt, however, that the best thing would be to accept the fact that particular objectives would require their own definitions of the sectors.

Linkages between small, medium and large industry, it was noted, have many aspects. There is, first, the market relation, where large and small industries compete for the same market; on the production side, small industries, especially in the modern sector are encouraged by government policy to become ancillaries to the large; traditional small industries also enter the network by means of, say, forms of the putting out system. Finally, subsidies and concessions to the small scale industries do not always go to them, as where some state small industrial corporations have been known to give credit to larger firms. It was also noted that whereas most of the large industries have collaboration agreements for technology, only 1% of the small industries do, implying that the efforts of Indian R & D, where not wasted, cater to the small industries.

As was to be expected, it was not possible, in the limited period of one session, to cover exhaustively all the issues pertaining to Indian industry. However, the discussions did seem to indicate various lines of inquiry that could be fruitfully pursued within the framework of the Long Term Project. The Institute has therefore decided to conduct another session, later this year, on the question of Indian Industrialisation; it is hoped that the forthcoming session will not only go more deeply into the various questions already raised, but bring fresh issues and insights into the discussion.